Contents

First steps in ALIR0

The tool Accessing freely to R from scratch (ALIR0) can help with data analysis. There are several types of analysis that you can use in your activities. As long as the user knows the method he wants to use, he can have optimal results.

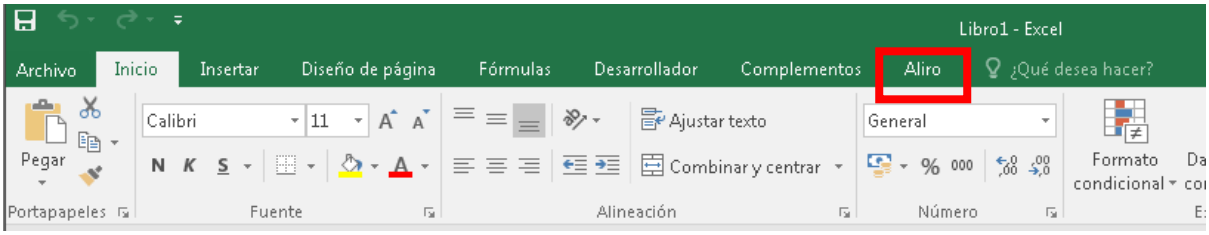
Considerations

In the first moments you will need internet to be able to download additional libraries, so it is recommended to verify you have a connection. Once the libraries have been downloaded, you will not need the internet, unless you find a new version of a library or the same ALIR0 tool.

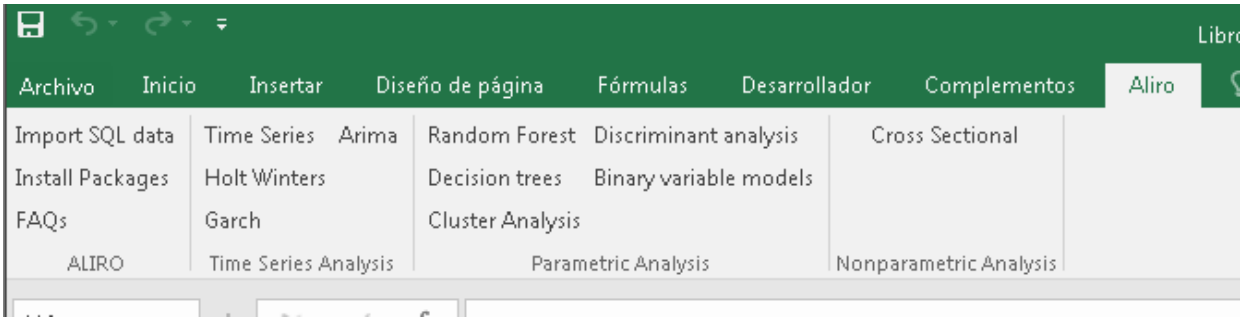
Verify that the BERT add-in is correctly installed, because with it the Excel connection is made to R, and of course, avoid uninstalling it. In the common errors section of the program documentation you can find how to verify that everything is installed.

Configuring ALIRO

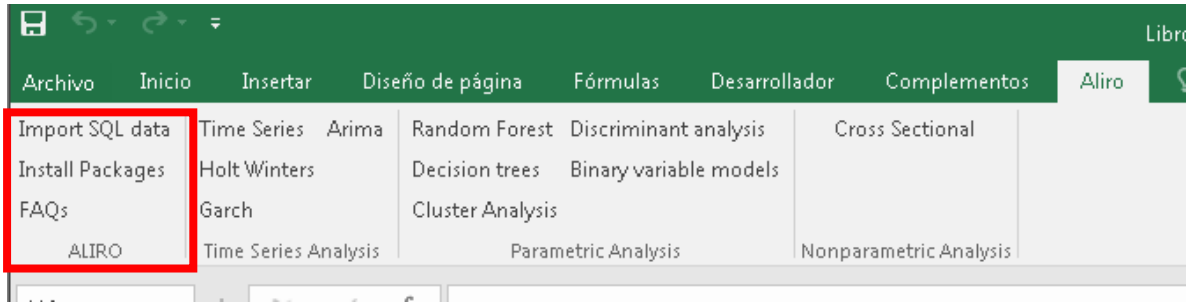
Once the add-in is installed, the user still has one last step before being able to use all the functionalities. In the Excel interface a new tab called ALIR0 will appear.



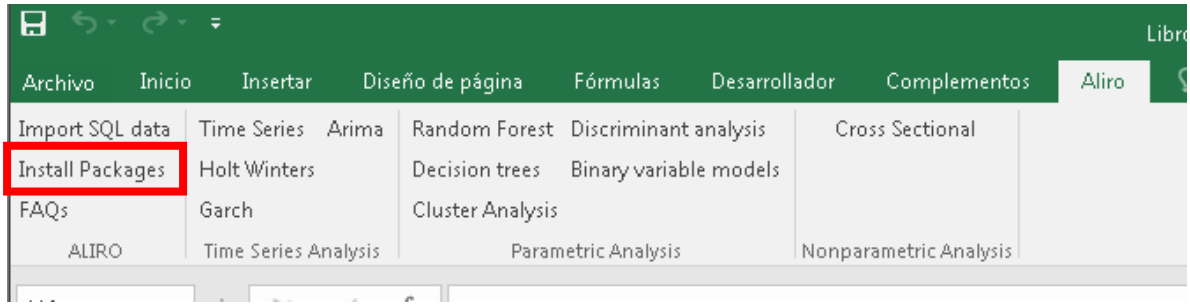
When you click on the option, the options presented by the add-in will be displayed



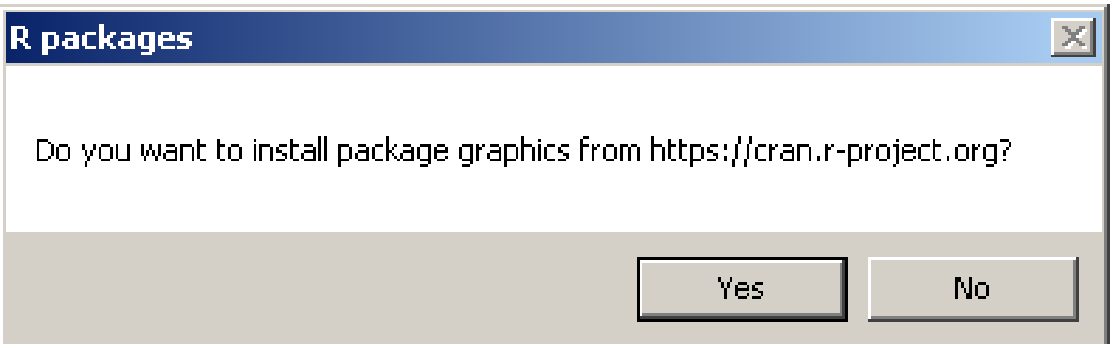
Here you can see four areas of the add-in, the first area called ALIR0 will be tools that will help you to perform your analysis.



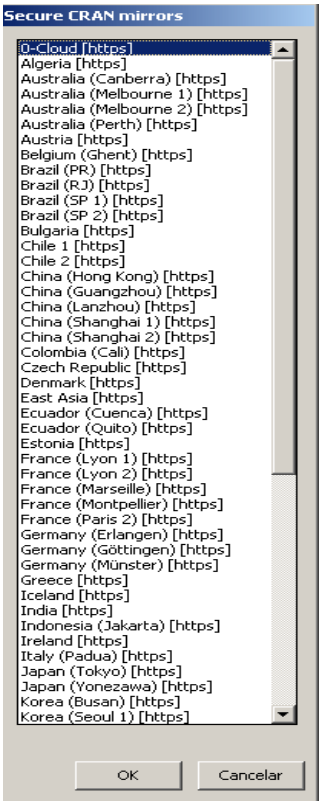
The second option is to install the packages that are going to need the functions that are executed in R. To install it you must first click on the button called "Install packages"



When clicking, a dialog box will open to accept that the graphic resources are downloaded from an address, which you only have to give in yes. This address is provided by the developers of R to download the libraries that the community creates.



Next to that, a new dialog box will appear to select from where you want to download the other necessary libraries, but do not worry just click OK and start installing the necessary libraries. After this, several loading bars will appear that will show the download progress, you just have to wait for them to finish and you can use the tool without problems.



Database module

In this module you can make queries to the SQL Server database engine and then use it in your data analysis with the features provided by the ALIR0 Add in.

Considerations when using the module

The database query module only works with the Microsoft SQL Server database engine (for the moment), so if you use another engine you will not be able to access this functionality.

Access to the database is done using Windows authentication, since as only local databases are used, this type of security is the most optimal thanks to the checks made by the same operating system.

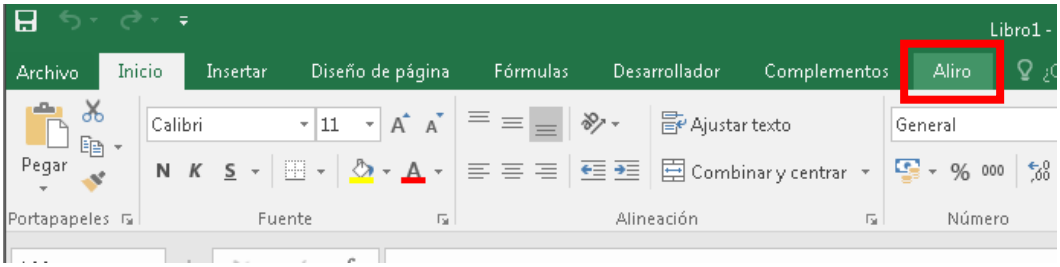
It is important that the SQL Server service is activated so that queries are performed optimally.

This extension of the Add-in uses the service called SQL Server Browser, so if it is not active, the necessary queries cannot be made. If you need help to activate this service in the part of "Common Errors" in our documentation, it shows how to solve this problem and others related to it.

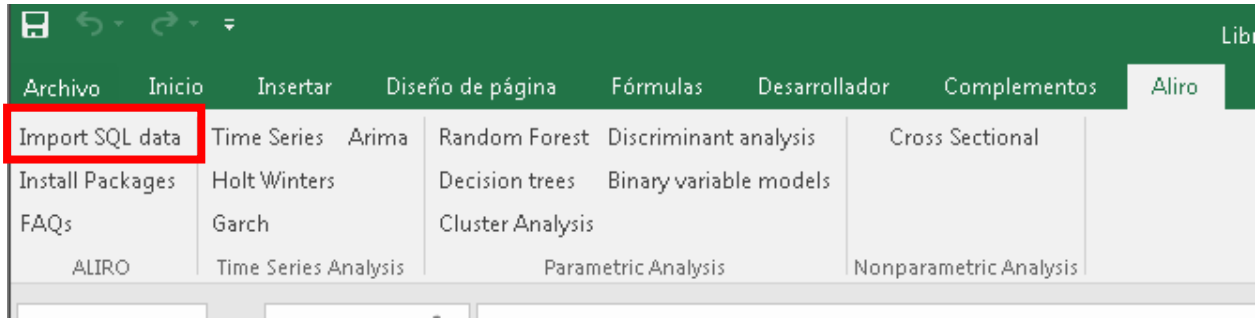
How use this module

Open the module window

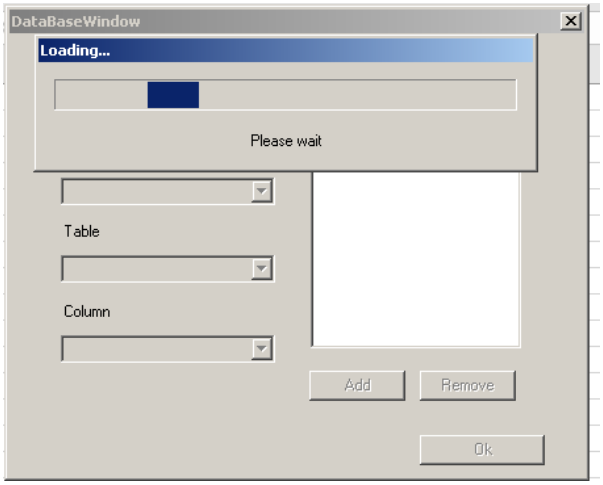
The first step once Microsoft Excel is open is to go to the ALIR0 tab, which is at the top.



Here you will find the different options offered by the Add-in, at this time we will go to the option "Import SQL data".

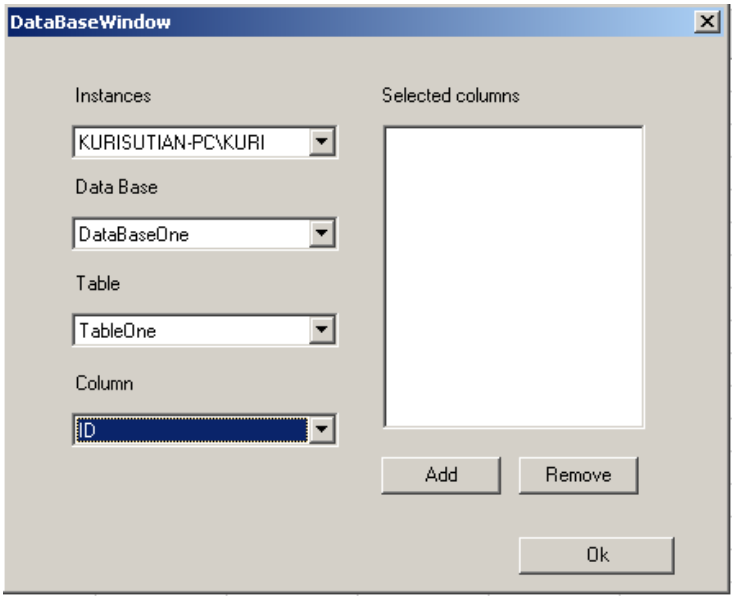


Pressing the option will load the window and a loading bar will be displayed while searching for the instances and databases

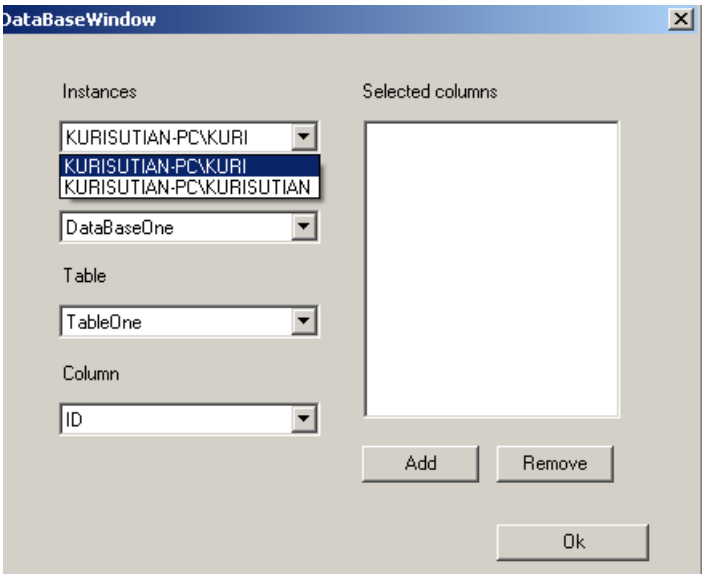


Adding information for the query

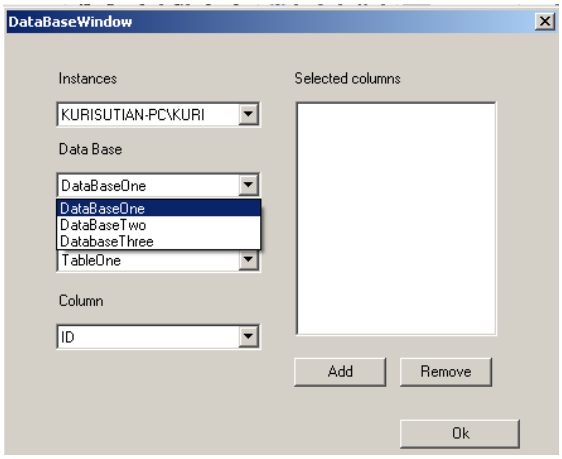
Once the window is loaded, the SQL instances of the machine will appear, as well as the databases of the first instance that appears in the list, well as its tables and columns.

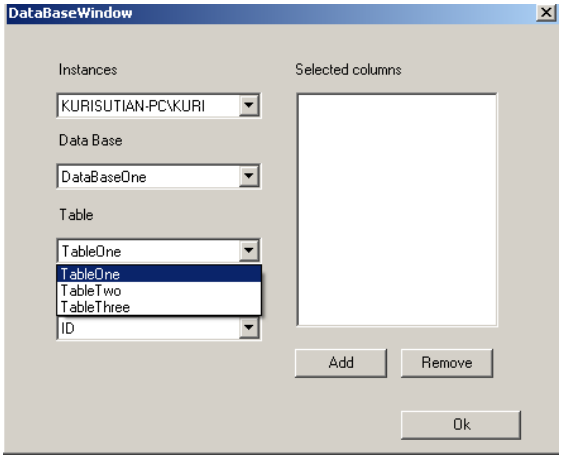


Here you can select the instance that you wanted from the menu that says instances.

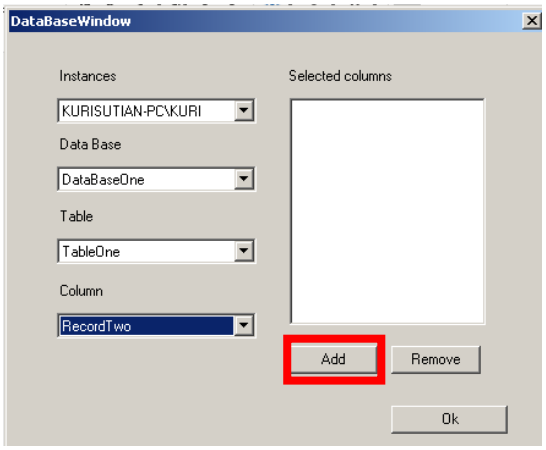


And the same with the options of database, table, column.

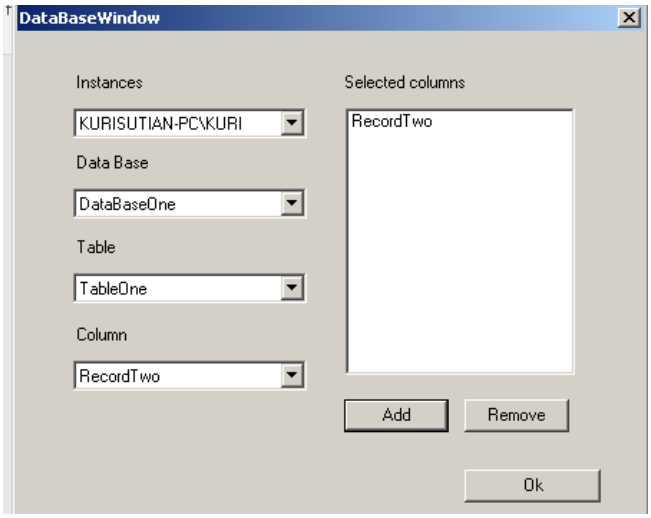




Once you select from where you want to obtain the information (Instance, Database, Table) select the specific column and proceed to press the "Add" button.

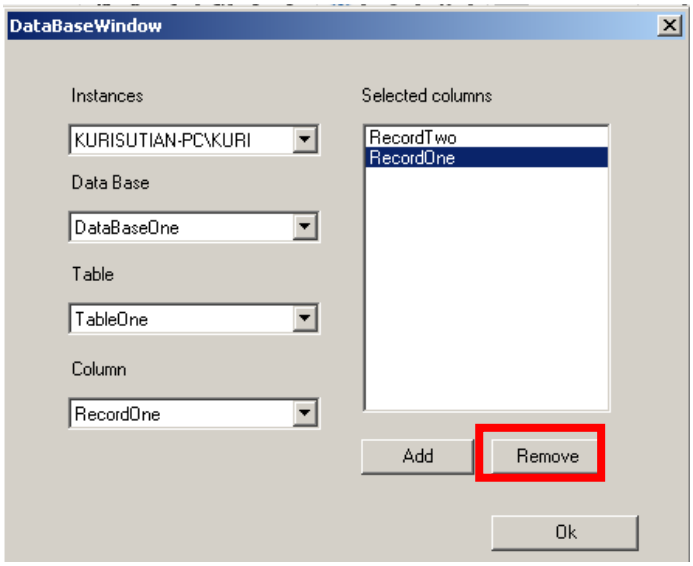


After clicking on the Add button, the name of the selected column will appear on the right side, called selected columns.



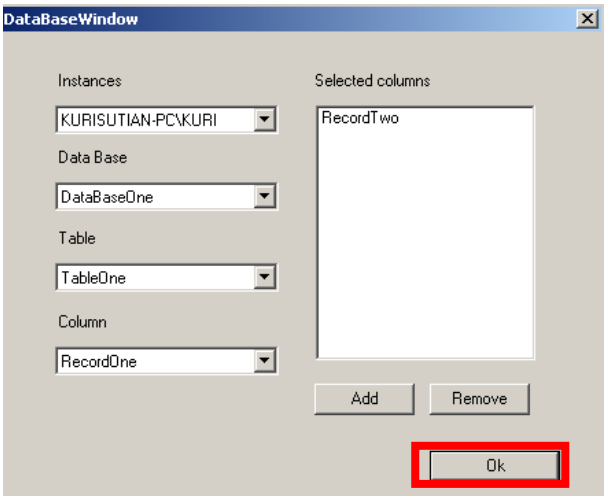
Remove information from the query

If you want to delete a column from the list of the query you must first select the column to be deleted and press the "Remove" button.

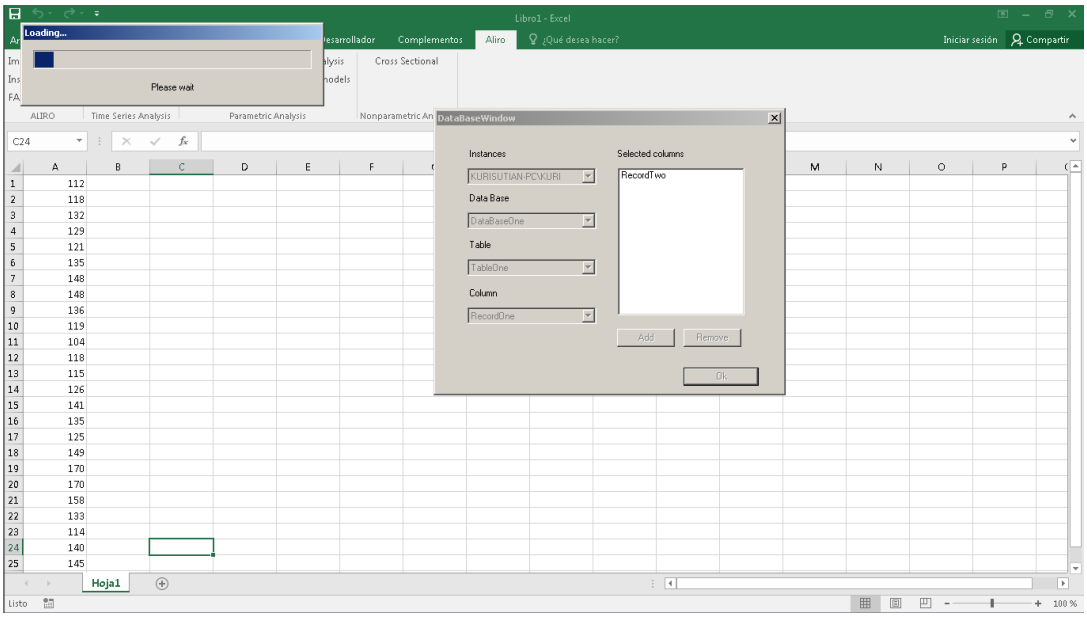


Conducting consultations

Once you have established which columns you want to add, you just have to press the "Ok" button and they will automatically be added to the spreadsheet that you has open at that moment.



Depending on the size of the query this may last little or a lot.



Time series module

This module, like the others, aims to help you in the analysis that you require in your work, offering all the potential that the R language has.

Considerations when using the module

When using this functionality, you must verify that the BERT Add-in is installed correctly and that the R engine is installed. In the section on common errors you can find more about this topic.

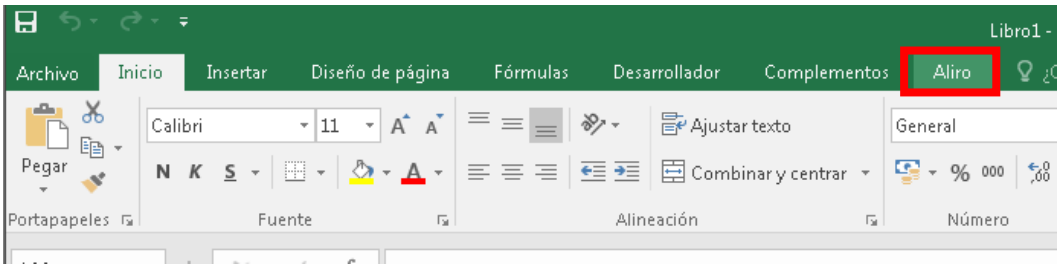
This tool is aimed at people with a little (or minimum) knowledge of the types of analysis to be performed, so if the user does not know them, it will be a good idea to study them before use.

How use this module

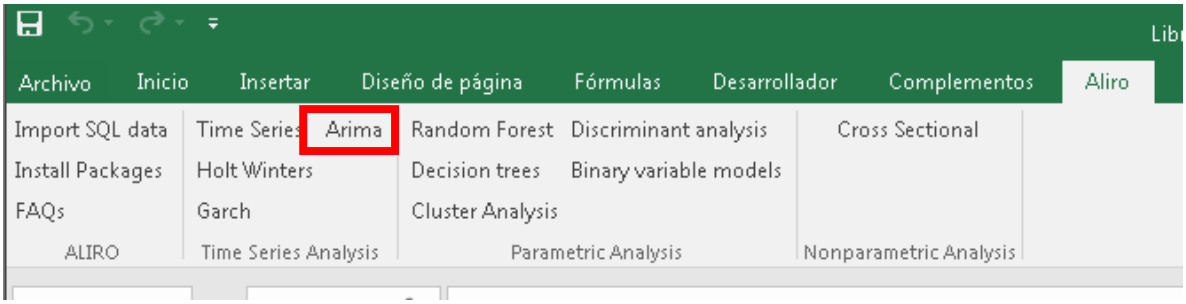
These instructions work the same for all the types of analysis that the ALIR0 tool presents, with the differences of parameters that each method has, for this reason it is important that the user knows the method that he wishes to use.

Open the windows

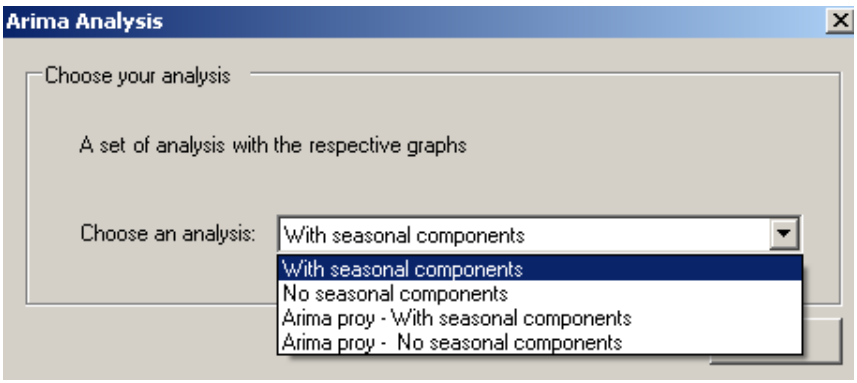
The first step once Microsoft Excel is open is to go to the ALIR0 tab, which is at the top.

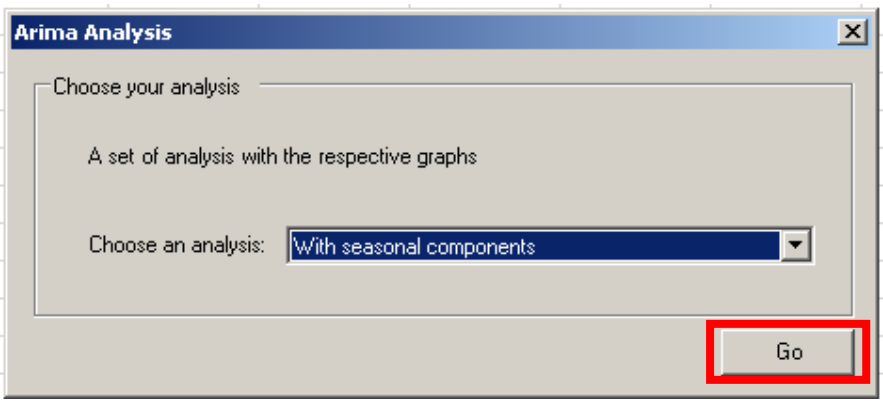


Here you will find the different options offered by the Add-in, at this time we will go to the "Arima" option in the Time Series Analysis section.

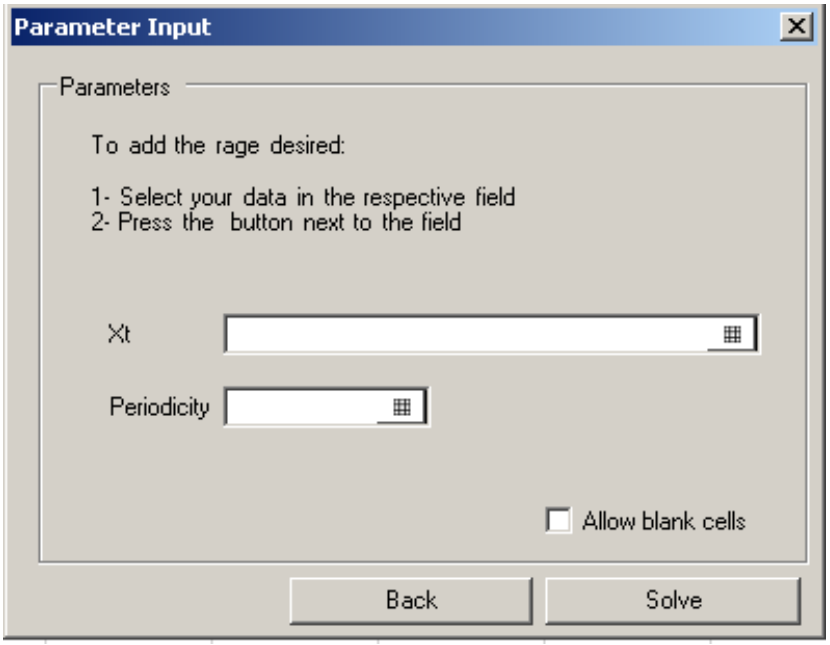


Pressing the option will load the window with the variants of the method, here you should only select the one you want to use and click on the "Go" button.

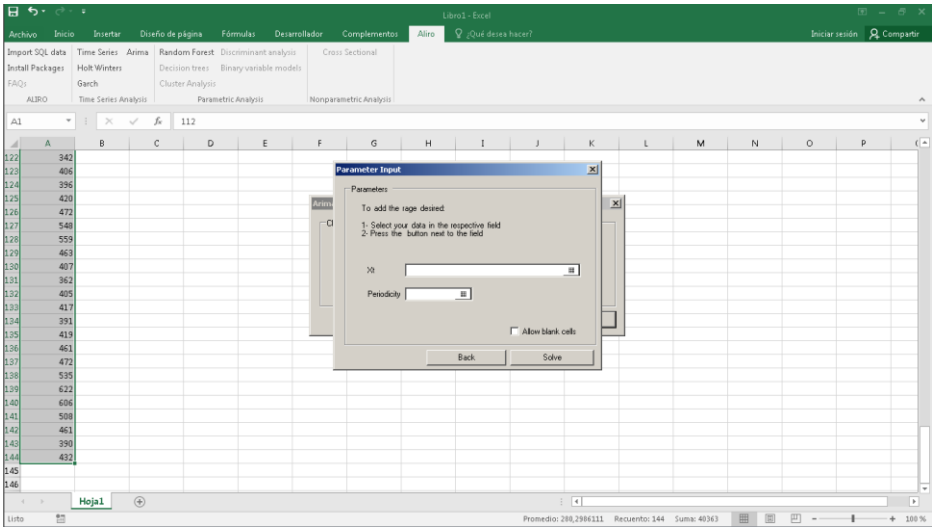




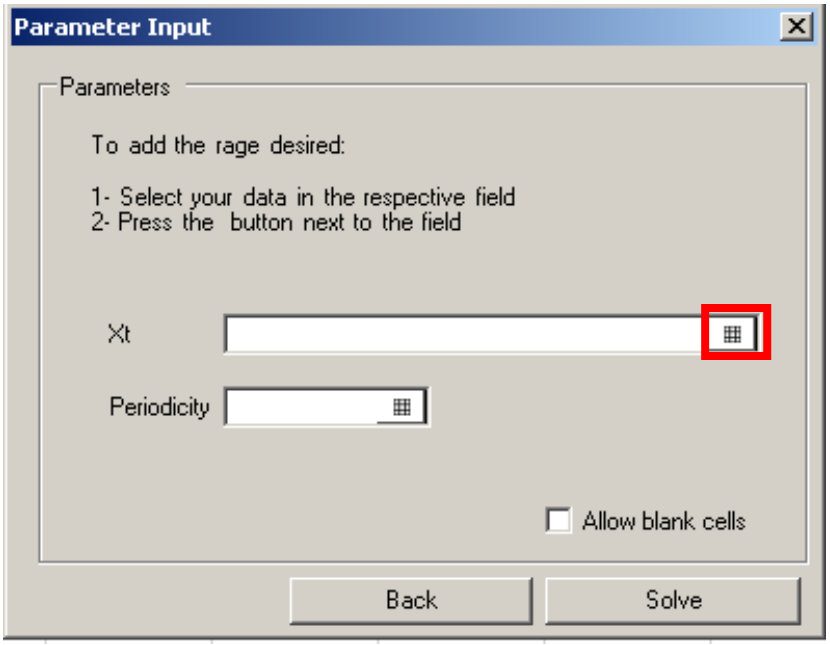
Then a new window will appear where you must select the range of data you want to analyze and the different parameters that the method needs. For this particular case, the Arima method with a seasonal component was selected, so the input parameters are the range and period of the data.



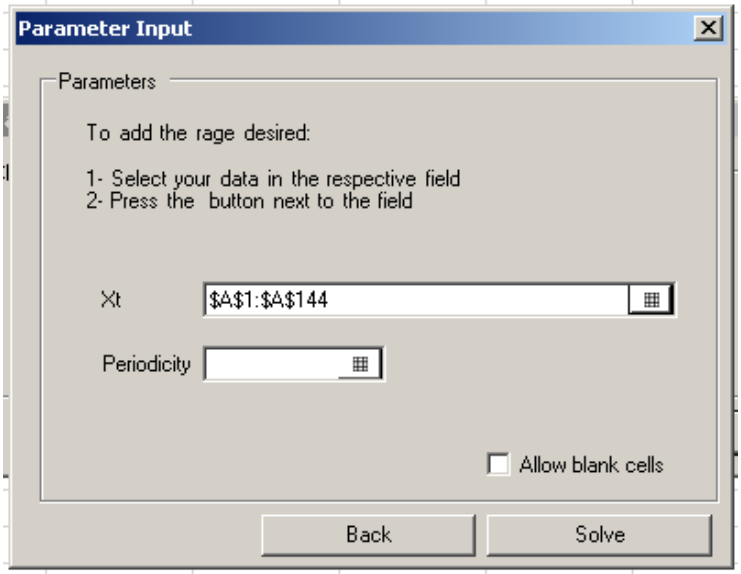
Now in the spreadsheet you must select the range of data to be evaluated.



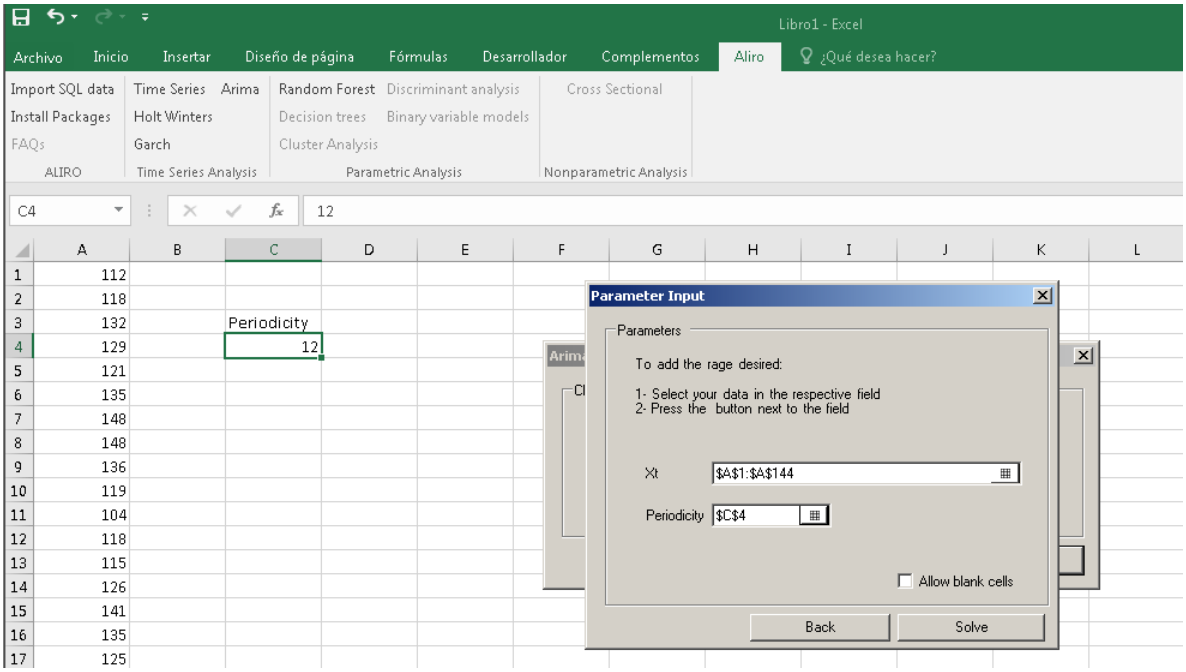
Now in the window again we proceed to press the button next to the text field that says Xt.



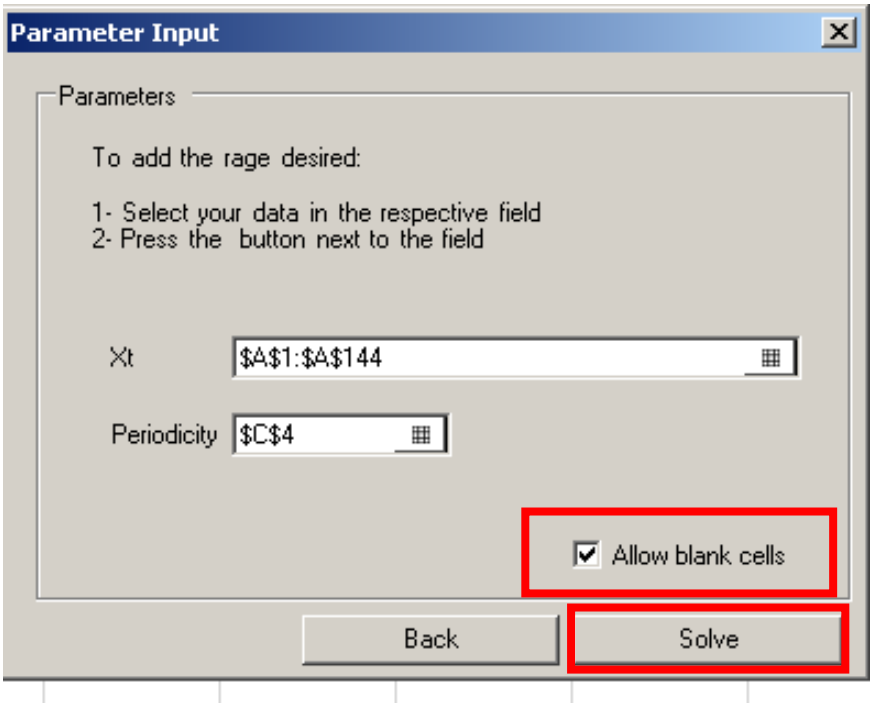
Once this is done in the text field, the data range will be loaded.



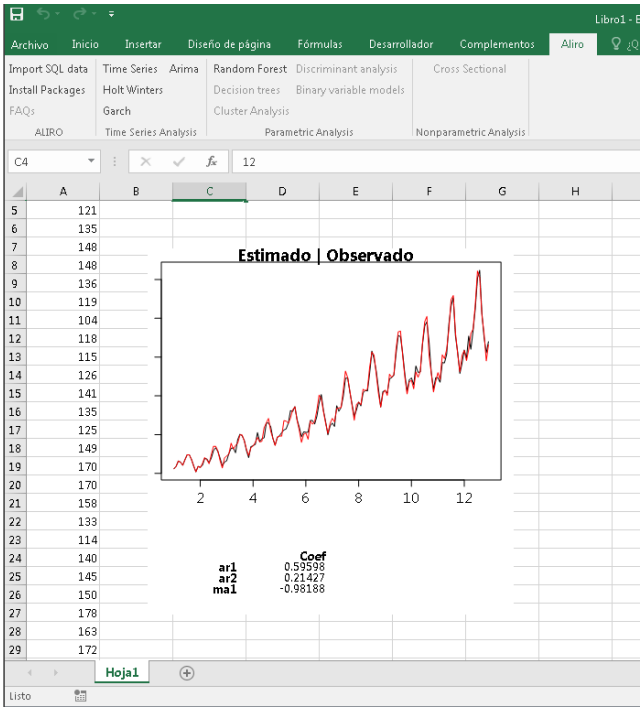
Now for the periodicity, proceed to do the same, select the cell in the spreadsheet and press the button next to the text field that says periodicity



Before finalizing we select the option to allow blank cells and proceed to click on the solve button.



After waiting a bit in the spreadsheet the graph will appear with the analysis already done.

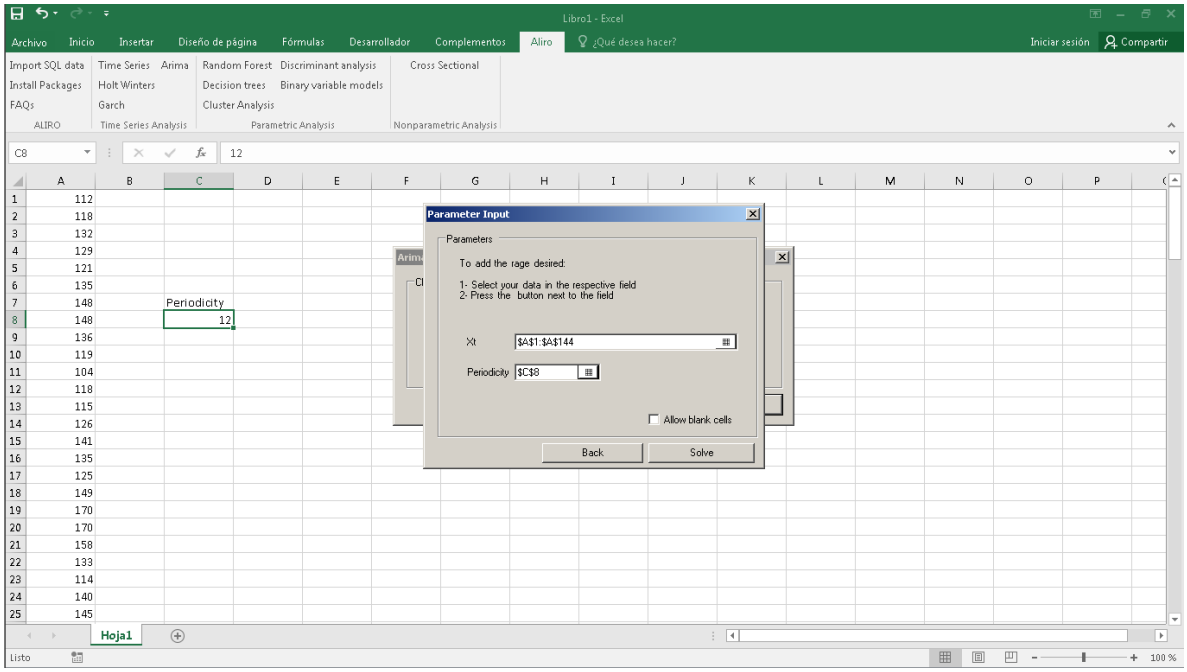


Common errors in ALIR0

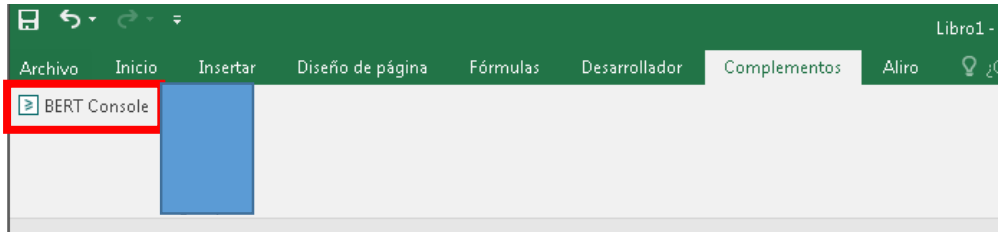
In this section you can find the errors that you may experience while using the add-in

Badly installed bert2 folder

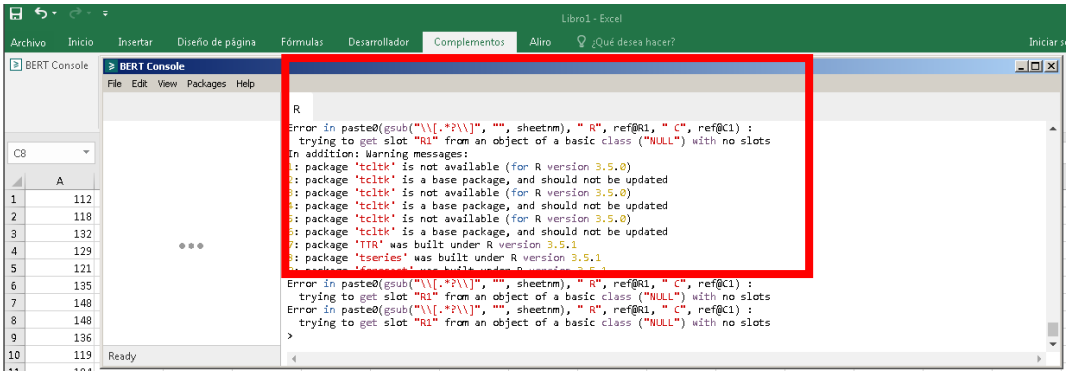
If you are going to perform an analysis and when you click on the Solve button in one of the methods and nothing happens (as shown in the image).



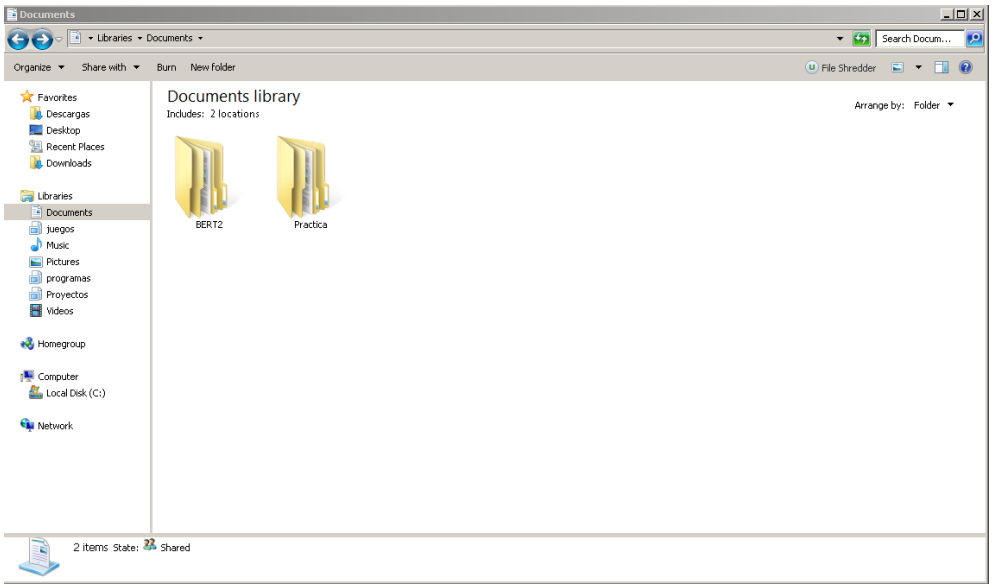
You must go to the add-ons tab and look for the BERT Console option to open a window where it will show what happens in R.



If the R console shows an error like the one indicated below, it means that the files necessary for the operation of the program were not installed where they should be installed.



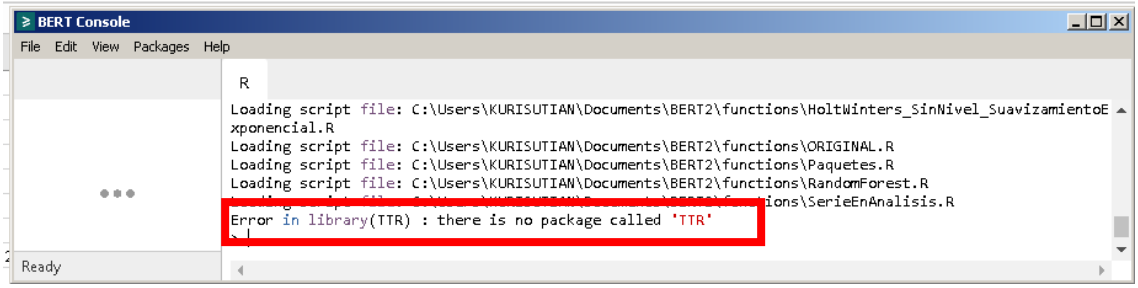
To solve it, is important to verify that the BERT2 folder is installed in My Documents. It is common that in Windows 10 by user configuration the folder is installed in One Drive in a folder called My Documents, which makes it look like it is properly installed but in reality is doesn´t.



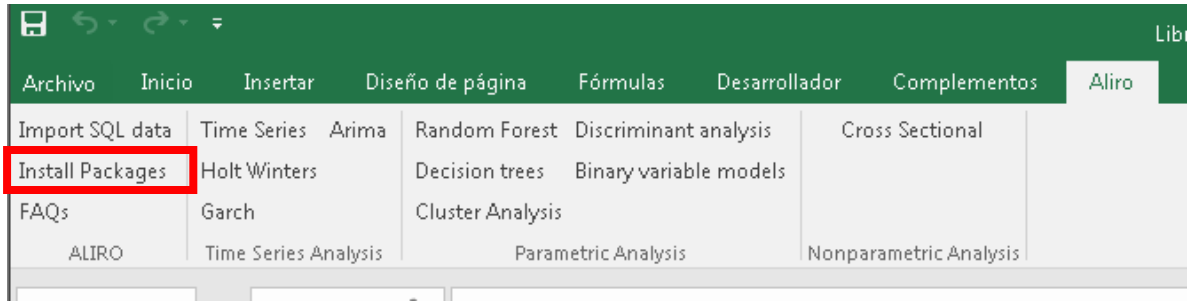
Once you have identified that the folder BERT2 is in My Documents in OneDrive, just copy it and paste it in My Documents of the machine. Once the process is finished you should restart Excel for the changes to take effect.

Libraries not installed

Another error that can occur when you press Solve and nothing happens is that there a missing library that needs the add-in to work. To identify if this is happens just go to the BERT console (see the previous point to see how to access) if an error appears as shown below.



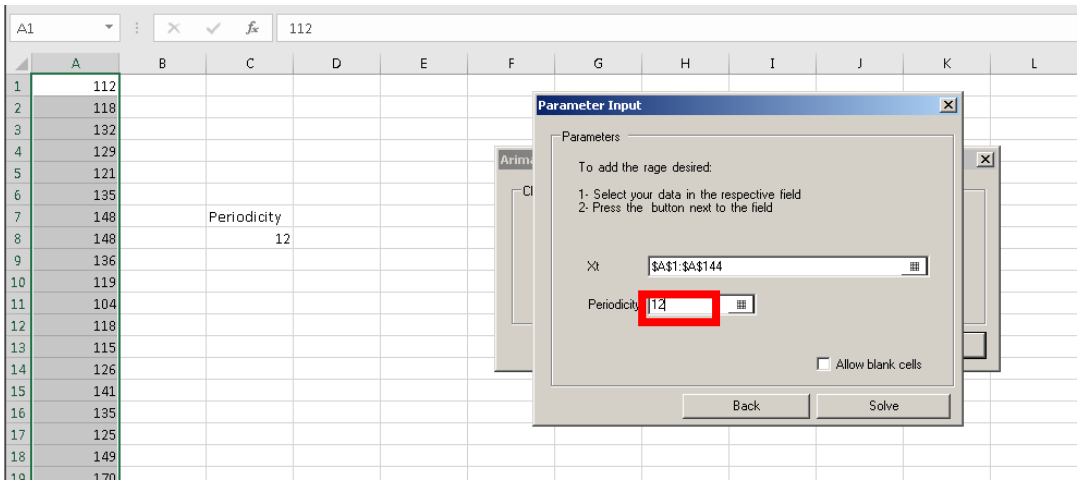
To solve it go to the options of the add-in and select the option of Install Packages, from here you can install the necessary packages. This is explained in detail in the documentation of first steps in ALIR0



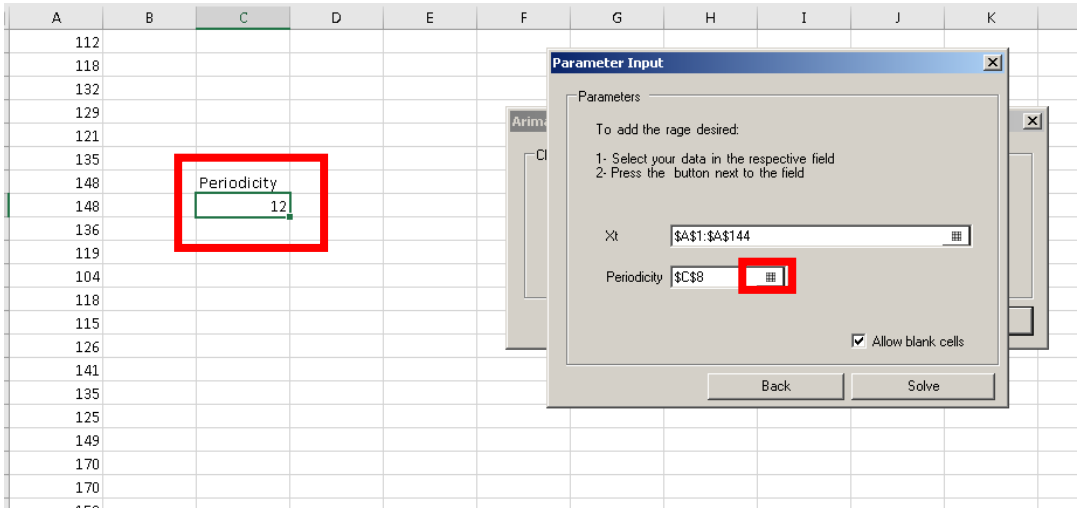
After performing this action, the software will run optimally.

Poorly entered parameters

A common error that can occur when using a method is when you enter a parameter manually, this will cause the program to fail, as shown in the following image.

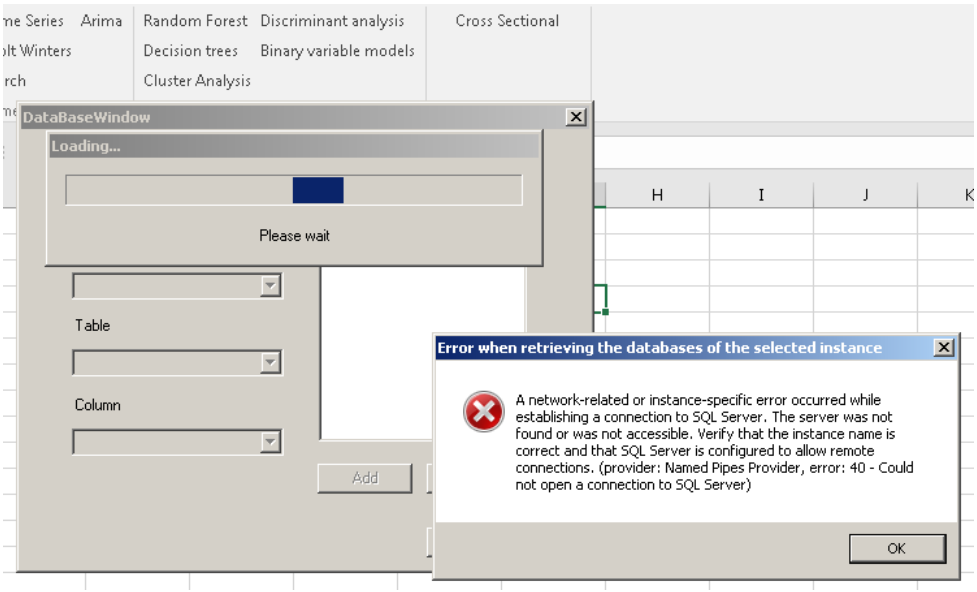


To prevent this from happening, select the cell in the spreadsheet and give the button next to the text field of the parameter, in doing so the name of the cell will appear in the text field

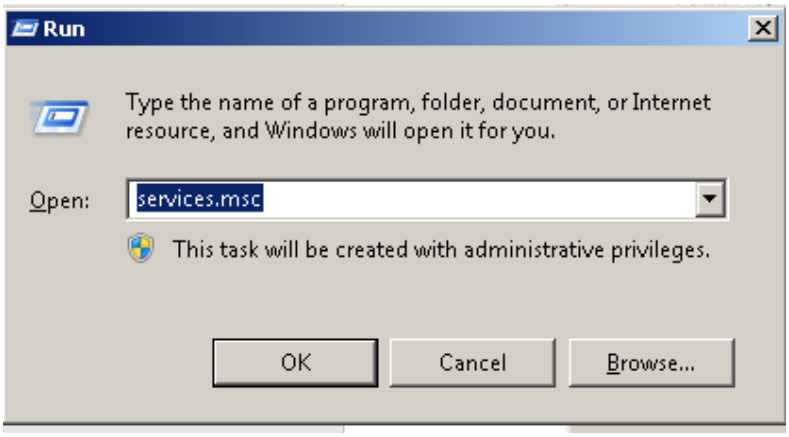


SQL Server service not started

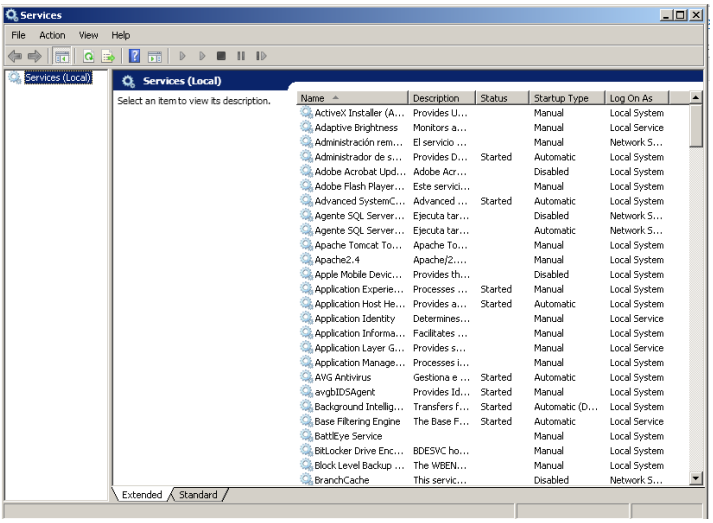
When using the database query module, make sure that the SQL Server service is activated, since if it is not working the module will not work and the module will show the following message.



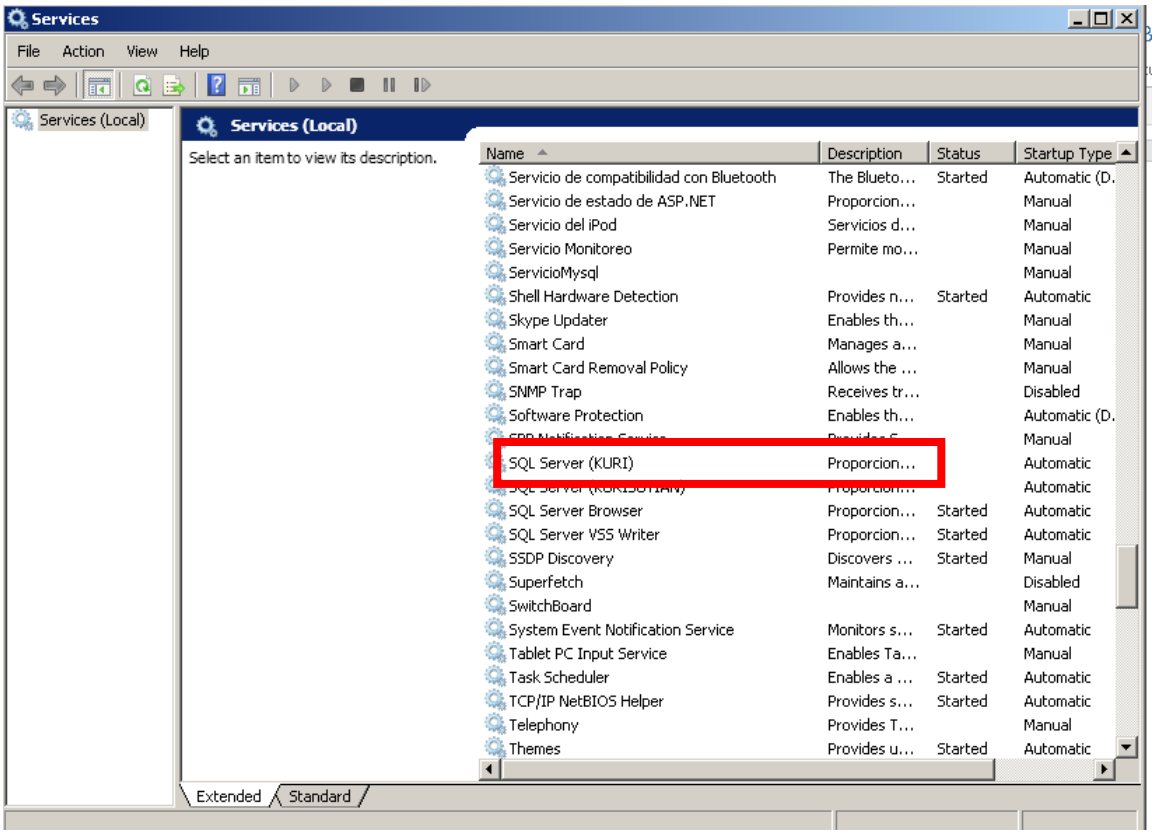
To solve the error you must access the services and activate it. To access, you must press the Windows + R key to display a window where you will type services.msc

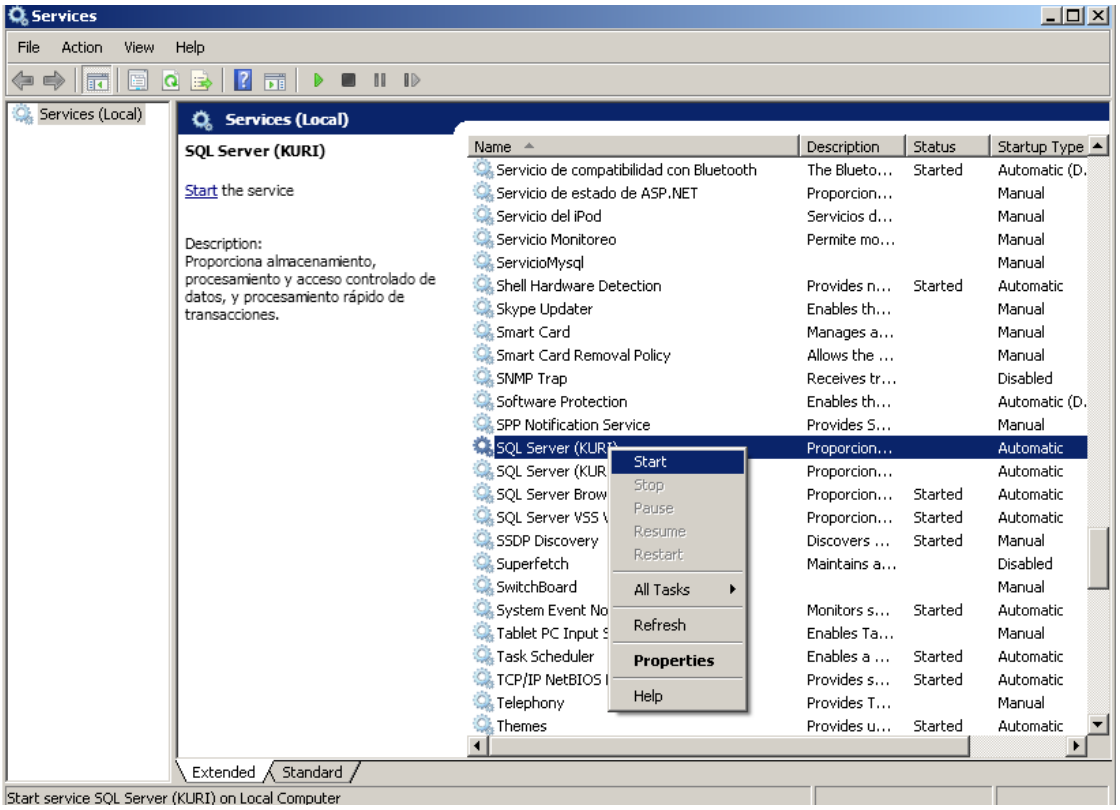


Clicking OK will open the services window



There you should look for the option that says SQL Server (Installed Instance Name) and by right clicking you can activate the service.

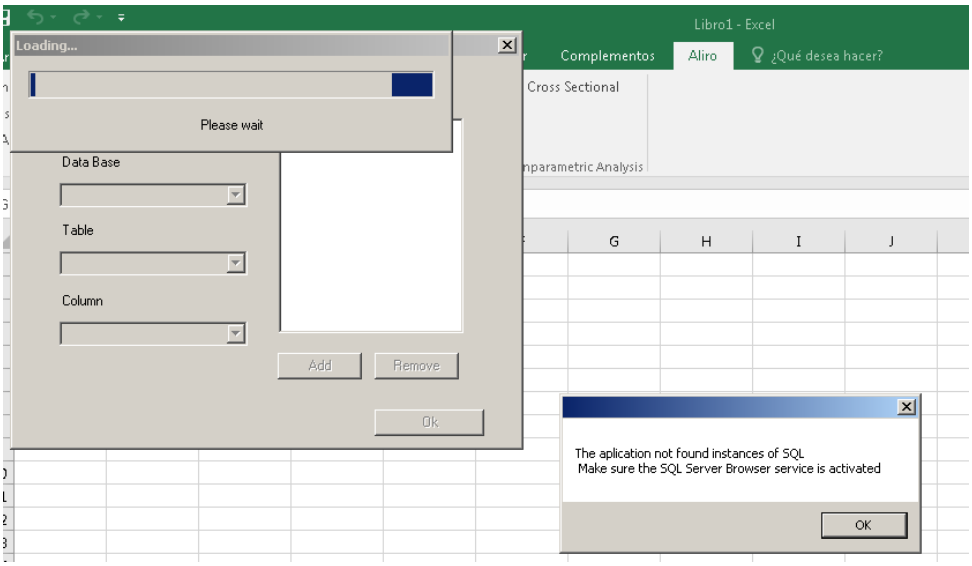




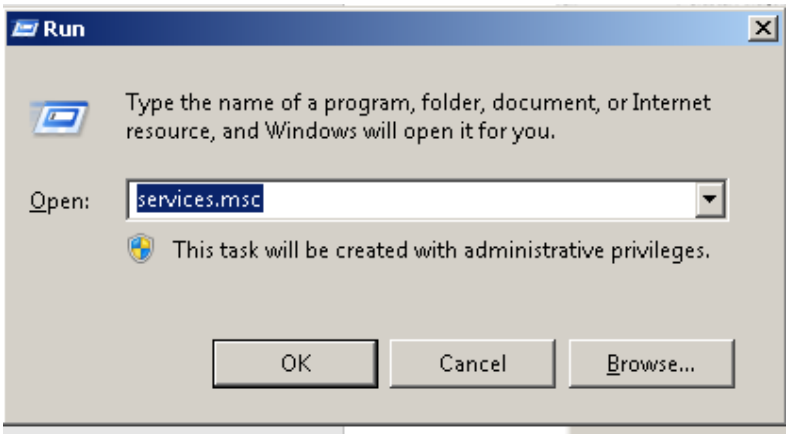
Once this is done you can already make your queries, you must to restart Excel

Invalid SQL Server Browser service.

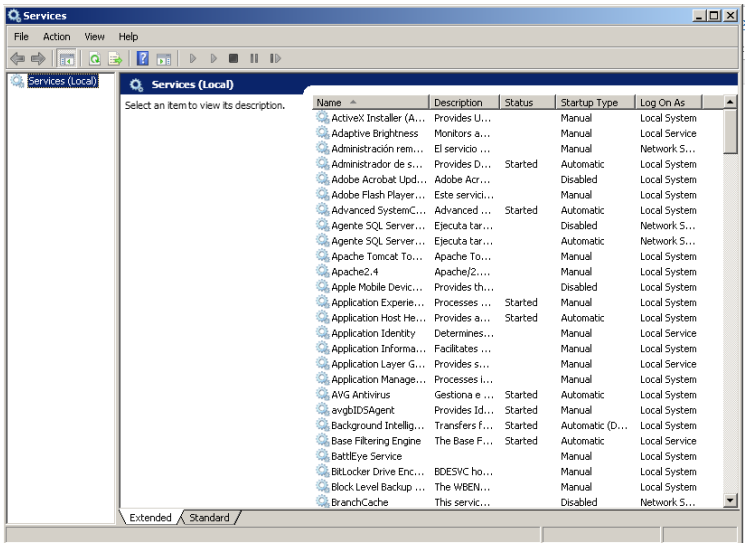
When SQL Server is installed by default this service is inactivated, the database query window will show a message warning this condition



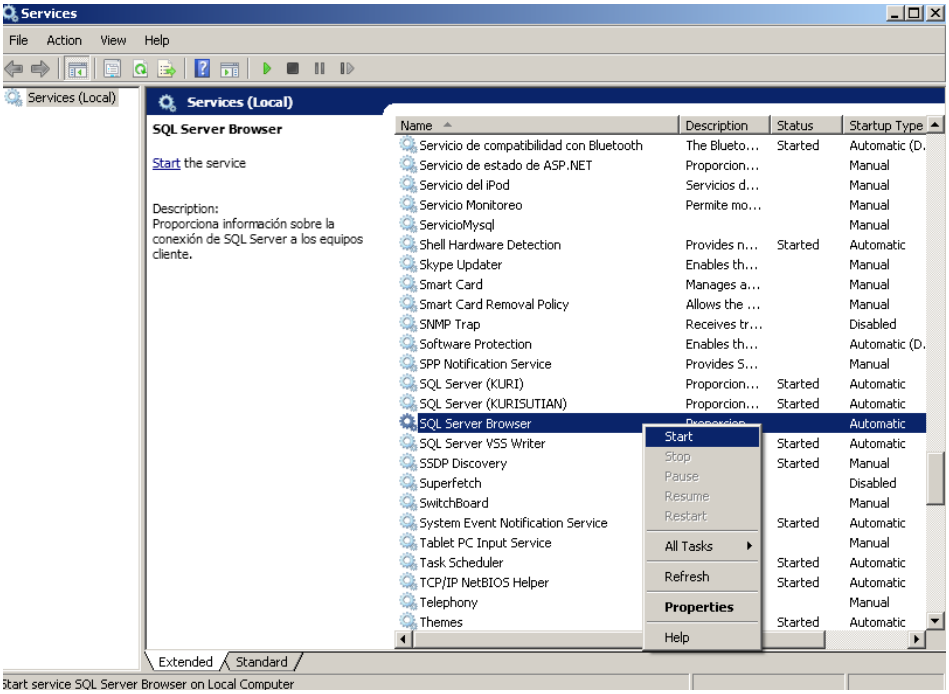
To solve the error you must access the services and activate it. To access, you must press the Windows + R key to display a window where you will type services.msc



Clicking OK will open the services window



There you should look for the option that says SQL Server Browser and by right clicking you can activate the service.



When activating the service, you must only restart Excel for the changes to take effect.