

Setting up a 64 bits C/Fortran/Python compiler and some useful libraries and tools on Microsoft Windows step by step

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February 12, 2014

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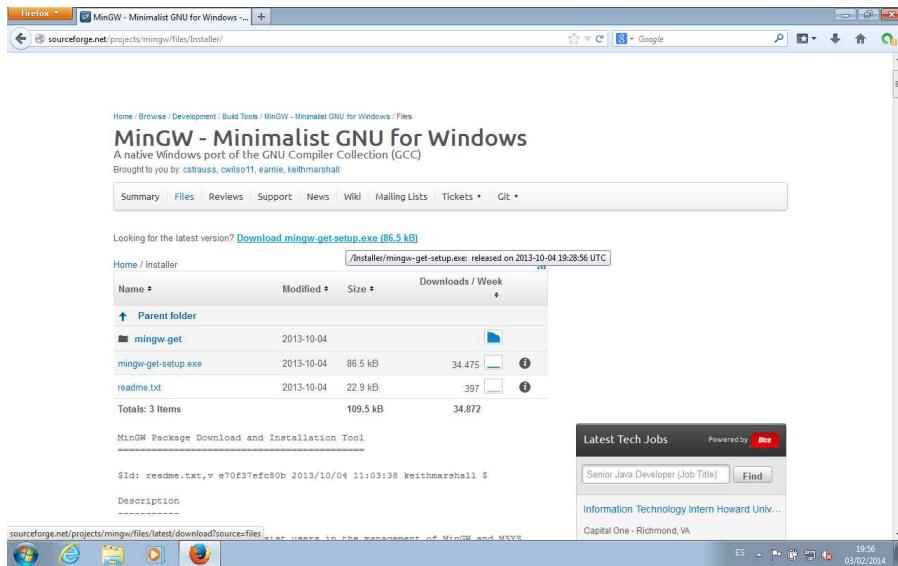
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SORRY! I have only a spanish license of Microsoft Windows 7. Therefore, some figures have spanish texts.

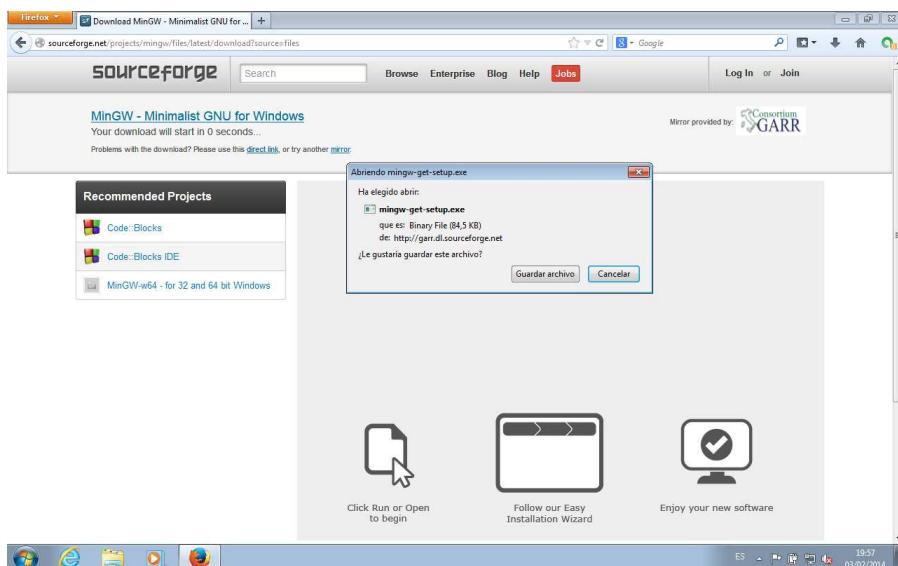
1 Installing MSYS

MSYS is a minimal Unix terminal emulator running over the Microsoft Windows. In this section we install and we do a direct access on the desktop.

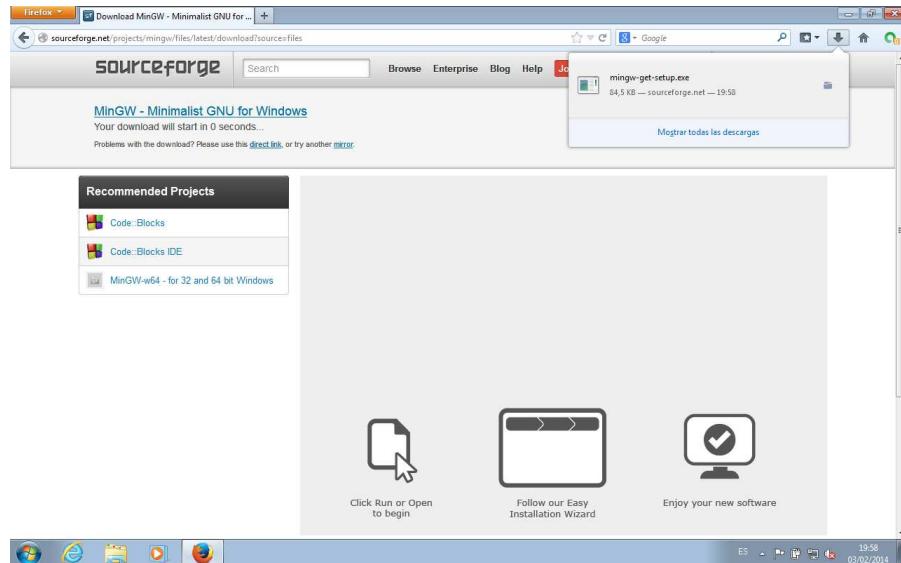
1. Download MSYS/MinGW installer (file mingw-get-setup.exe) on
<http://sourceforge.net/projects/mingw/files/Instaler/>



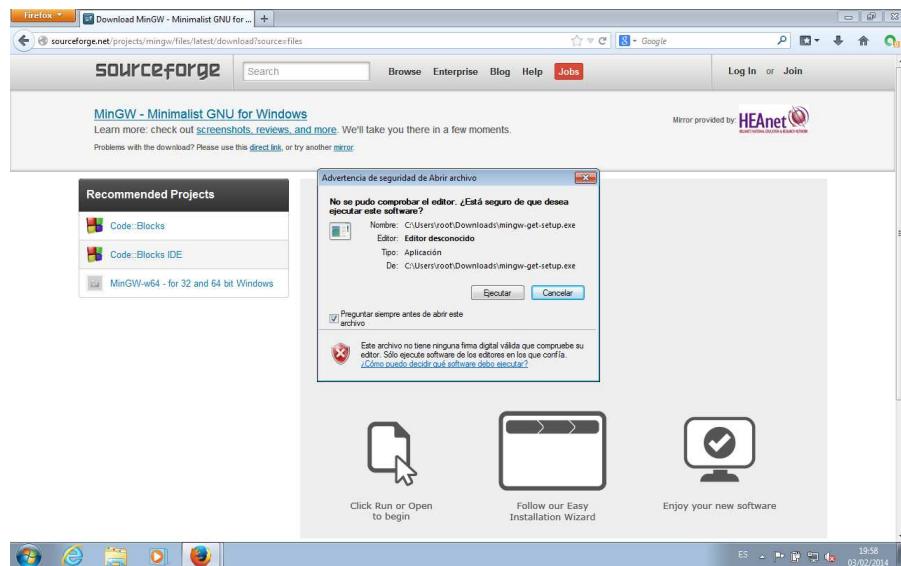
2. Click on **Save file** button



3. Click on the downloaded mingw-get-setup.exe installer



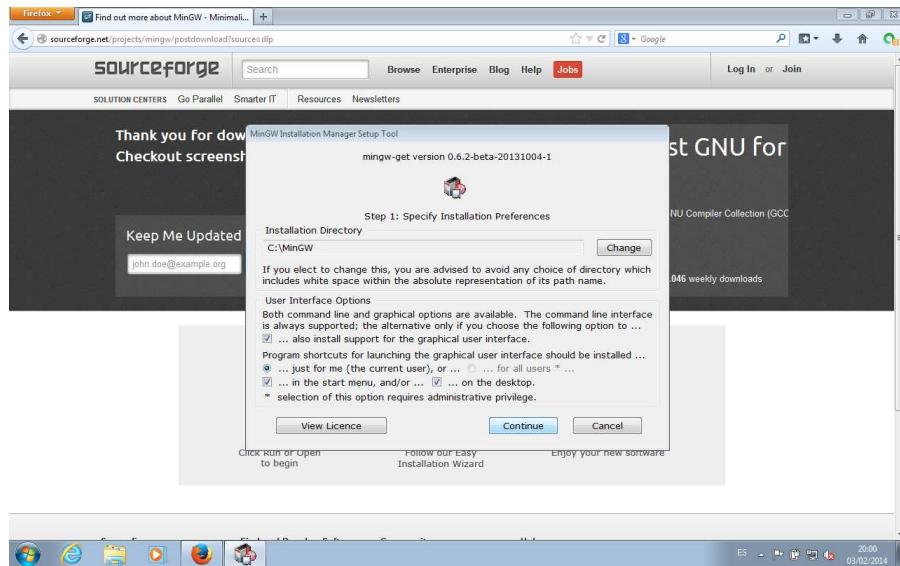
4. Click on the Execute button



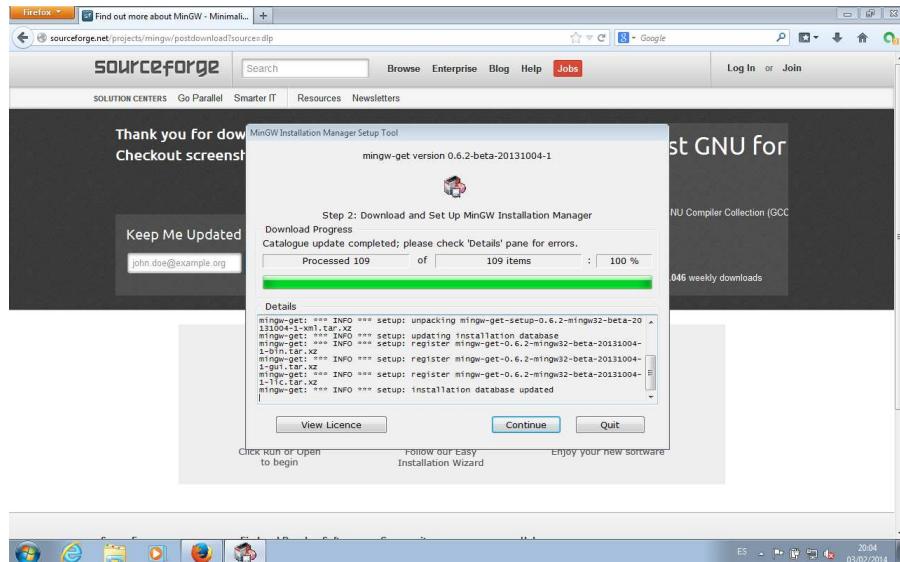
5. Click on the **Install** button



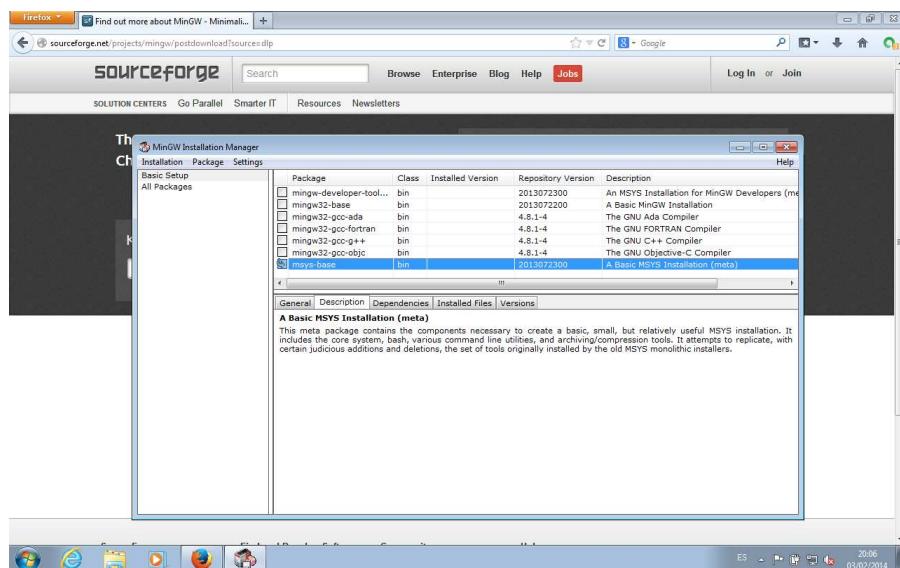
6. Click on the **Continue** button (WARNING! if you change the instalation directory you must change the /etc/fstab file on the MSYS system to work properly)



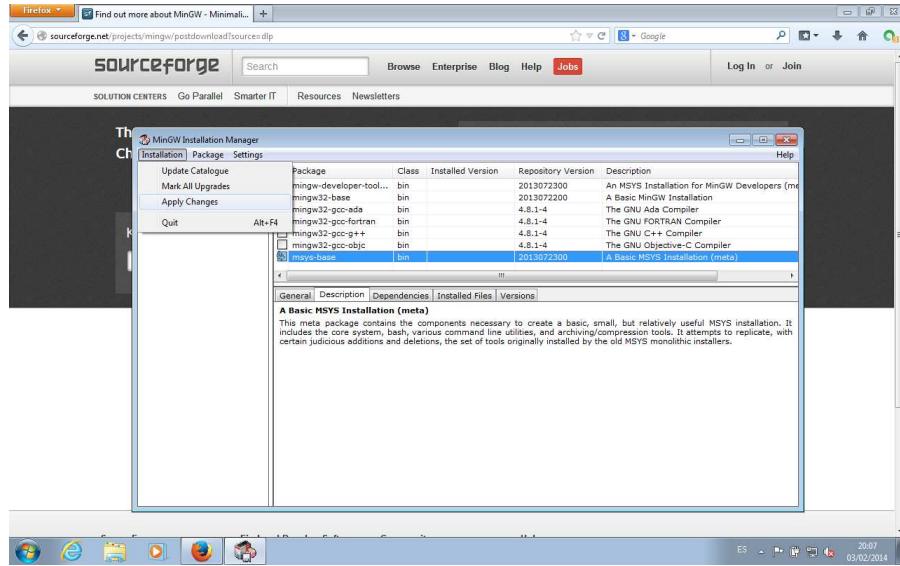
7. Click on the **Continue** button



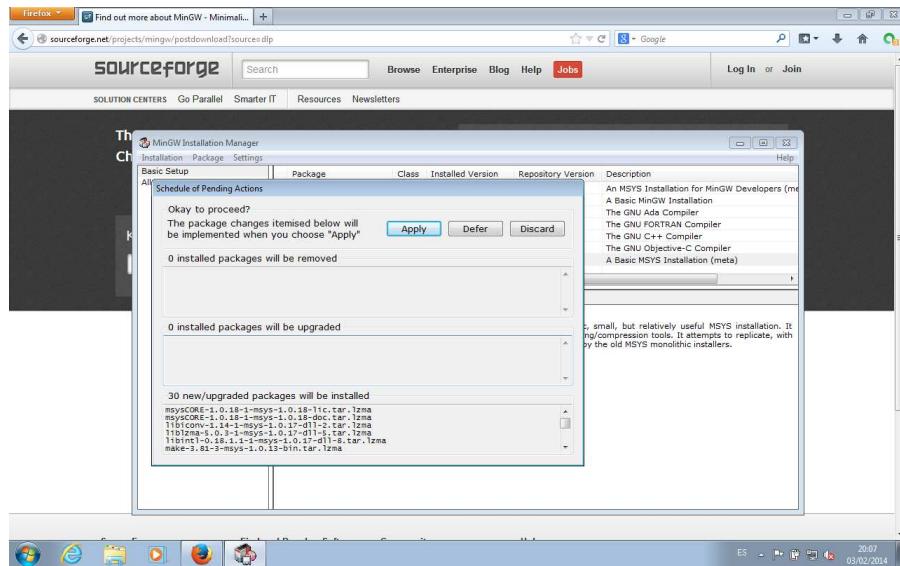
8. Click only on the **msys-base** option (other options install 32 bits compilers that can interfere the 64 bits compilations)



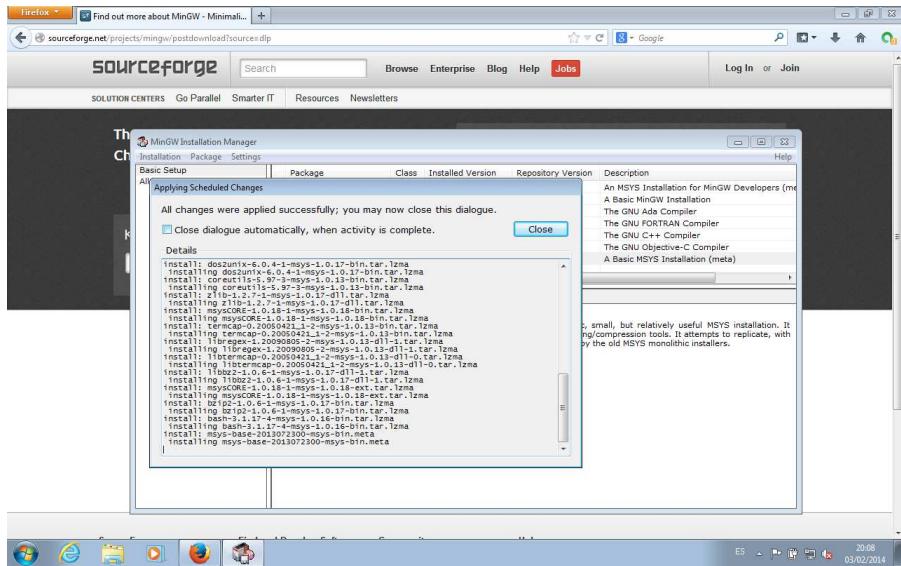
9. Click on the **Apply Changes** menu option



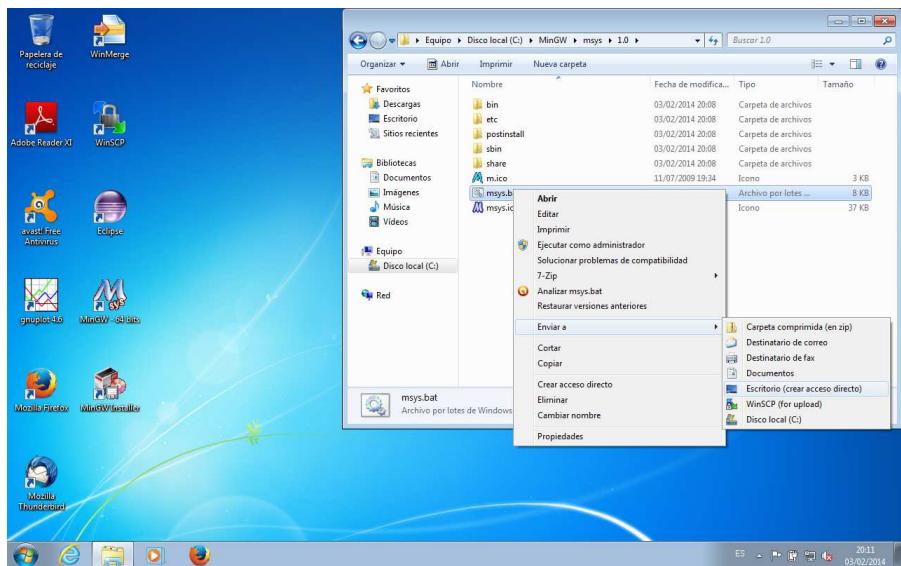
10. Click on the **Apply** button



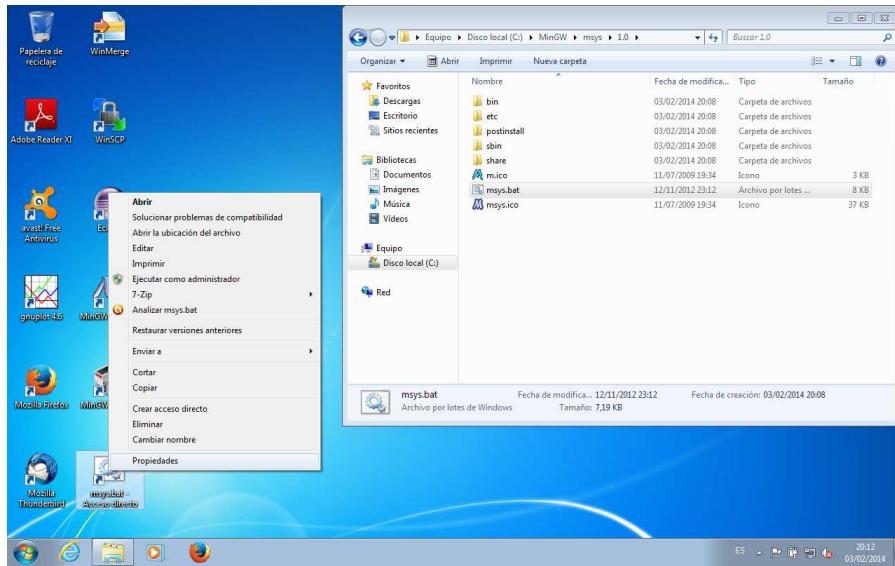
- Click on the **Close** button



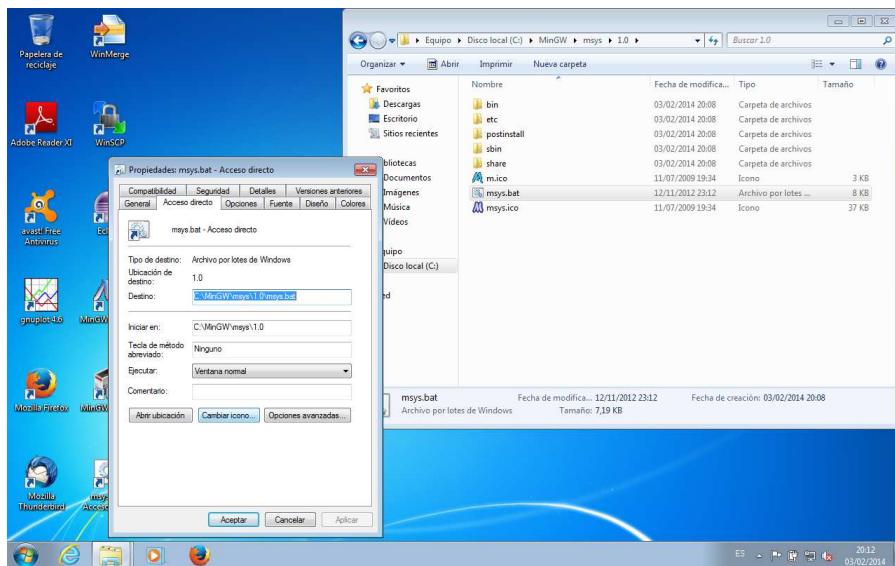
- Create a direct access of the **C:\MinGW\msys\1.0\msys.bat** file sending it to the desktop



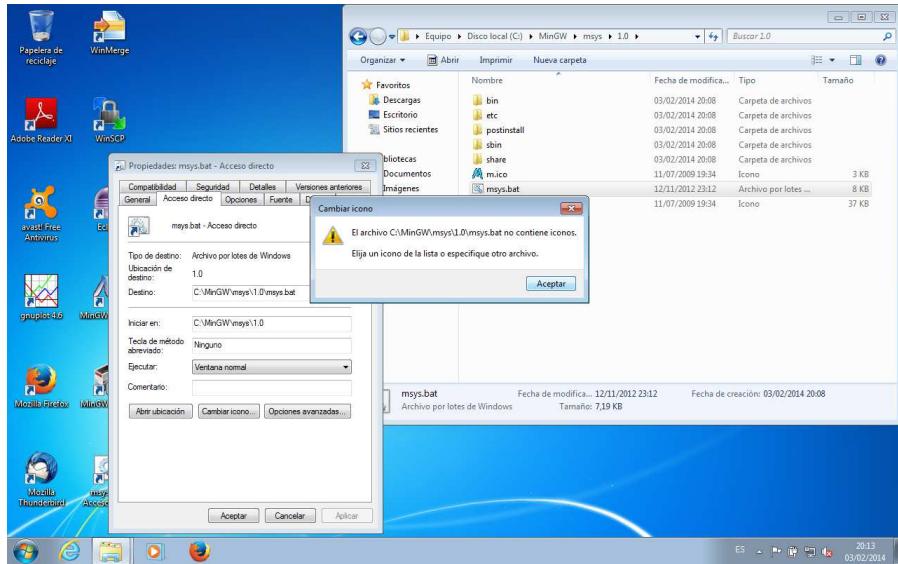
13. Select the new direct access and clicking on the right button and click on the **Properties** menu option



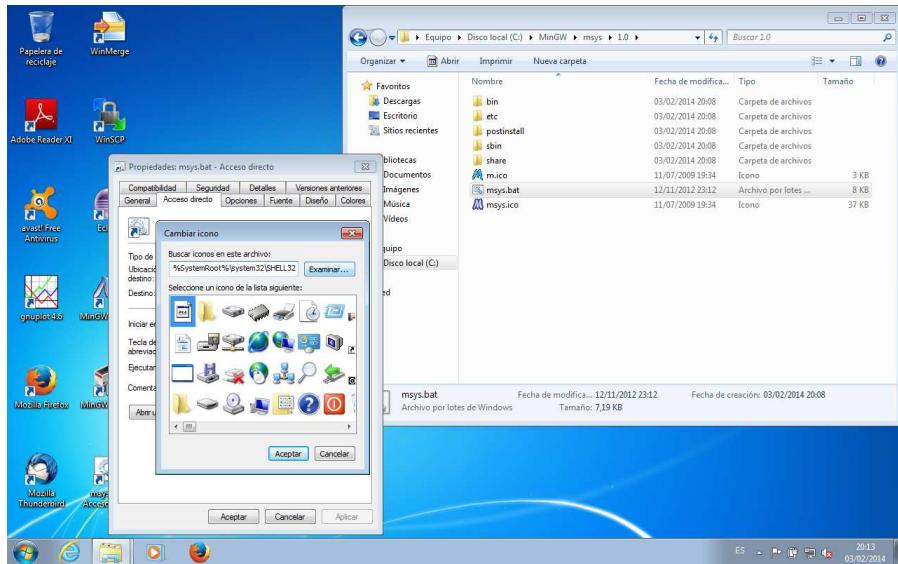
14. Click on the **Change icon** button



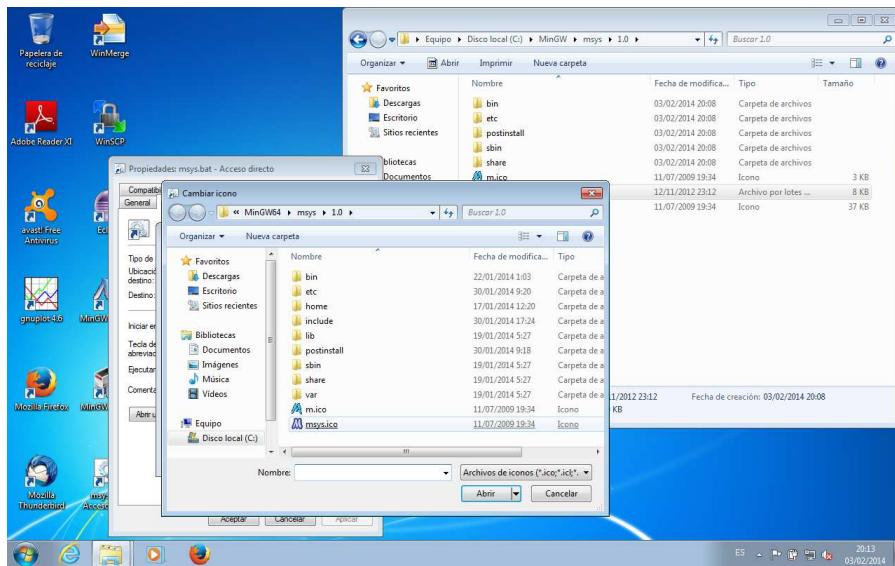
15. Click on the **Accept** button



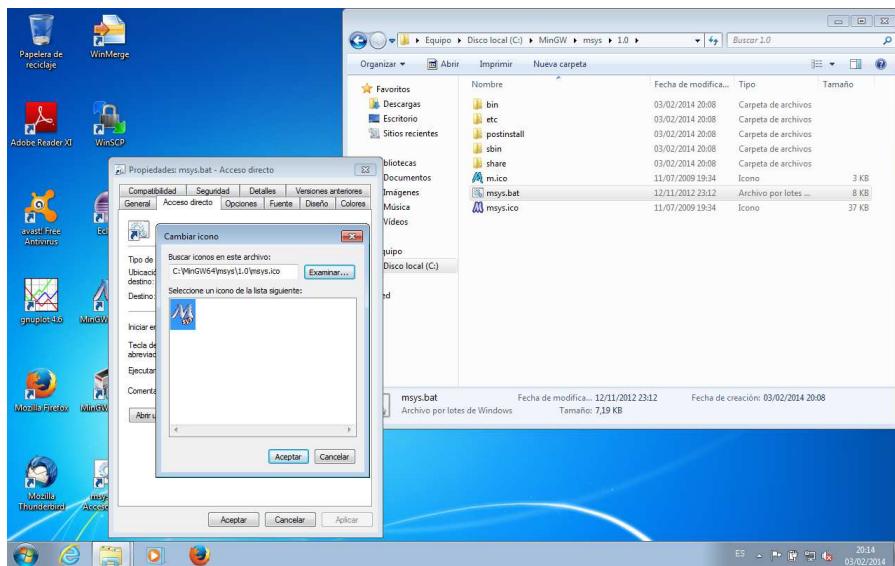
16. Click on the **Check** button



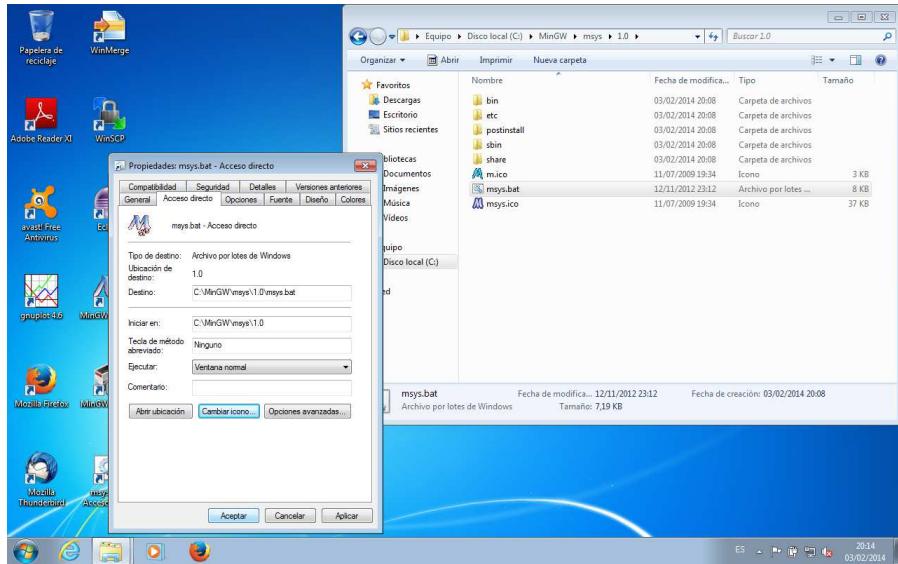
17. Select the C:\MinGW\msys\1.0\msys.ico (or C:\MinGW\msys\1.0\m.ico) file and click on the **Accept** button



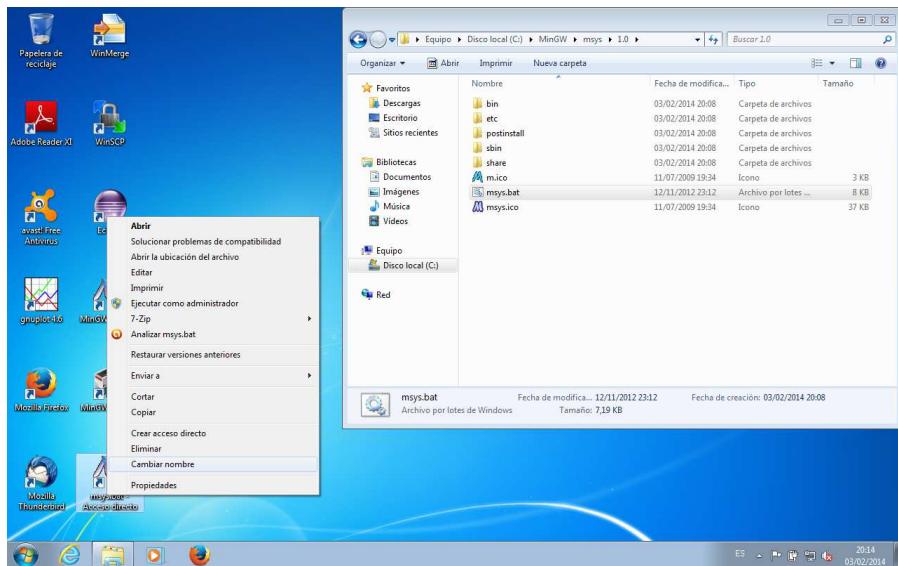
18. Select the icon and click on the **Accept** button



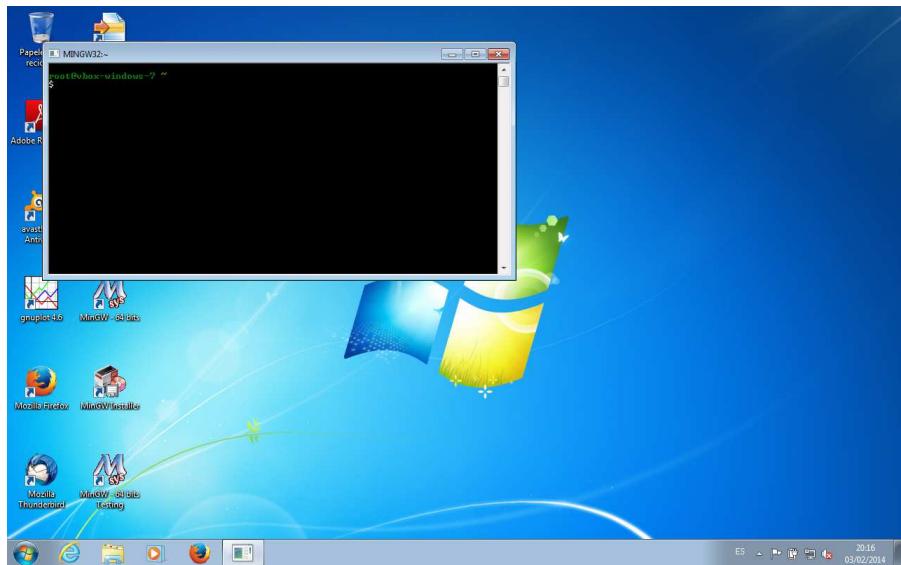
19. Click on the **Accept** button



20. Select the direct access clicking on the right button and click on the **Renomear** (Rename) menu option. Then change the label (i.e. MinGW 64 bits)



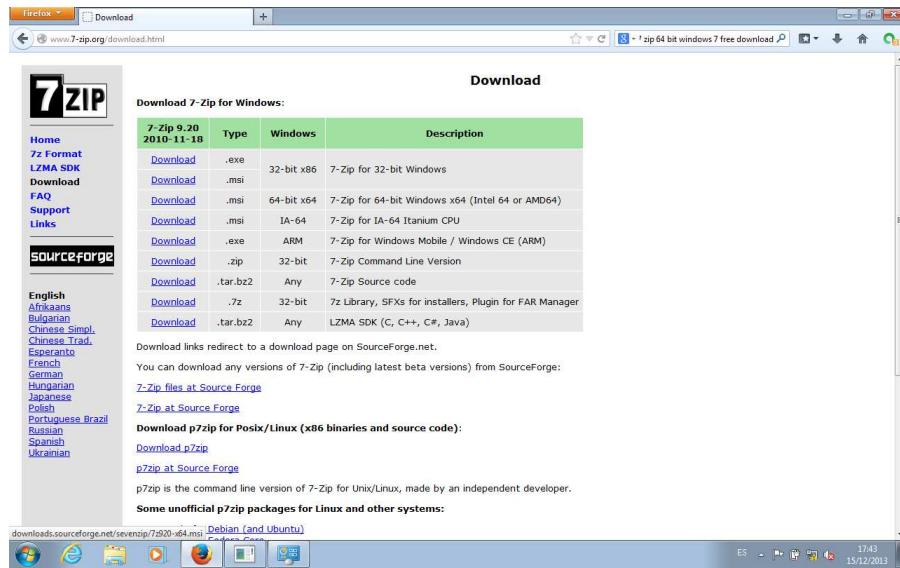
21. Click on the direct access button and you have a MSYS (minimal Unix) terminal



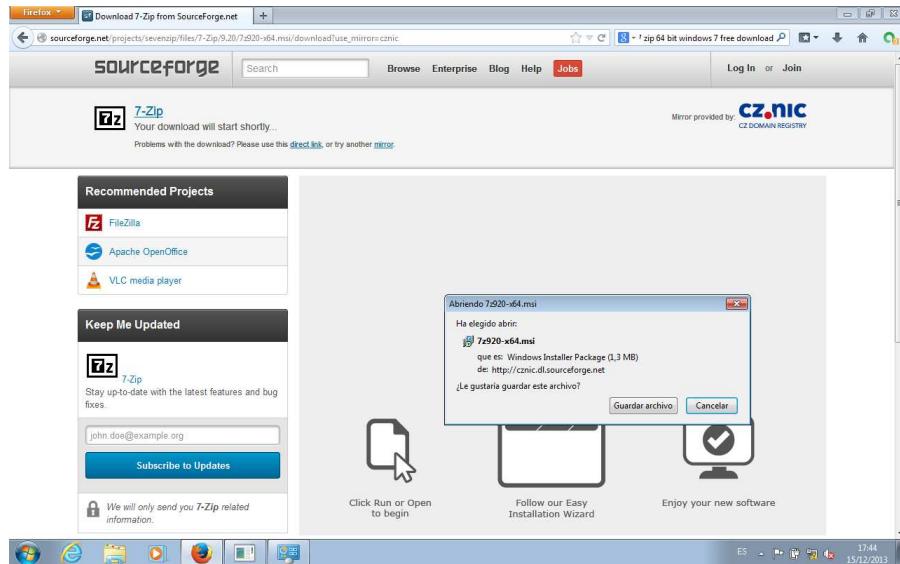
2 Installing 7-Zip

7-Zip is a files compressor required to install the MinGW 64 bits compiler. In this section the program is installed and configured to be accessible in the MSYS terminal.

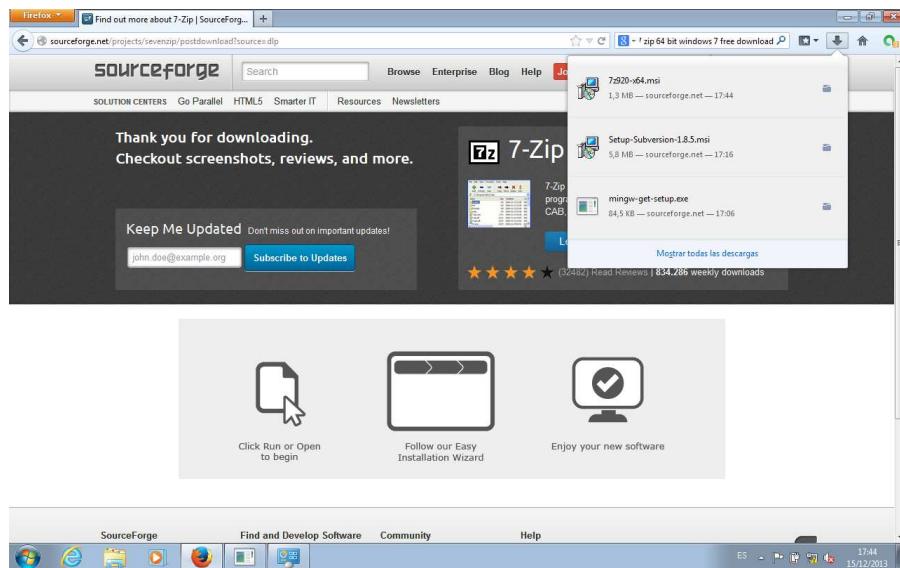
1. Download the 7-Zip 64 bits installer ([.msi 64-bit x64](http://www.7-zip.org/download.html)) on
<http://www.7-zip.org/download.html>



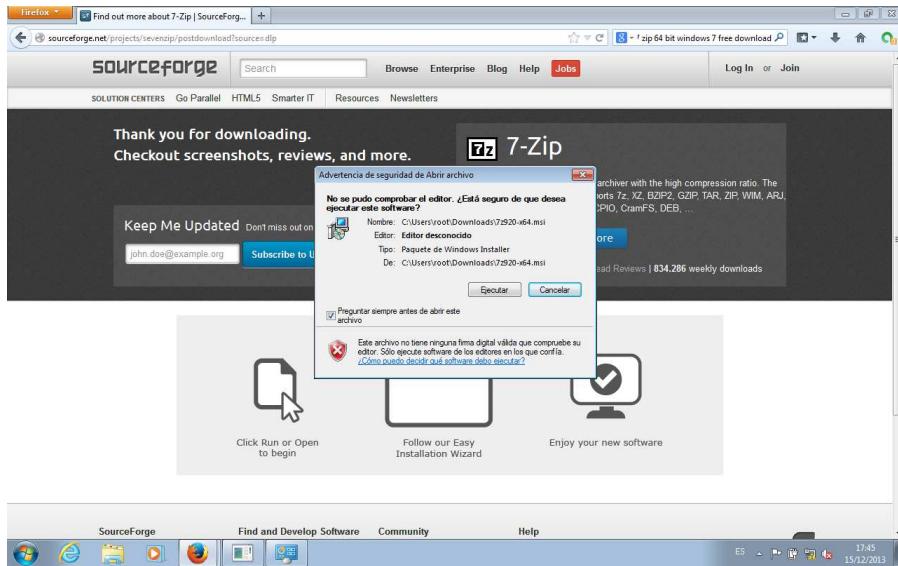
2. Click on **Save file** button



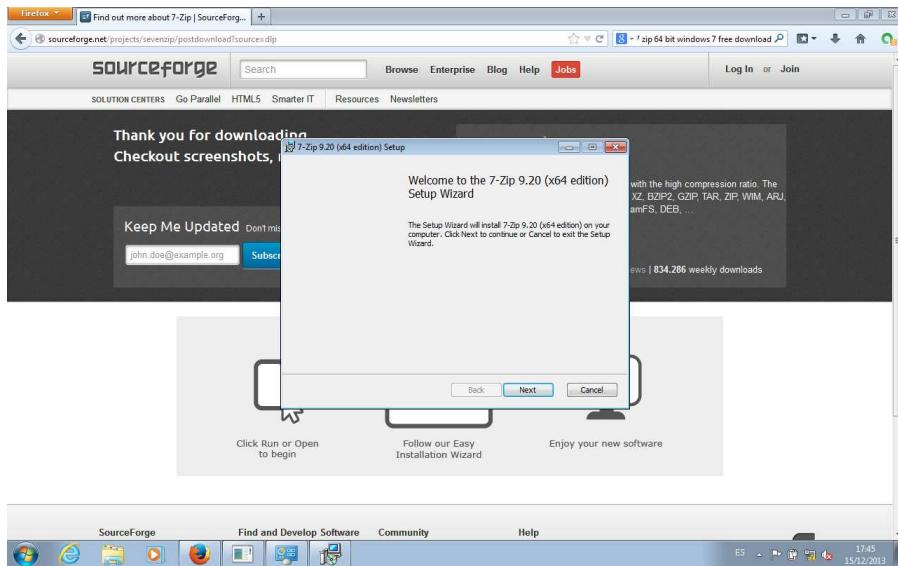
3. Click on the downloaded installer (**7z920-x64.msi** is the last version at the date to make this tutorial)



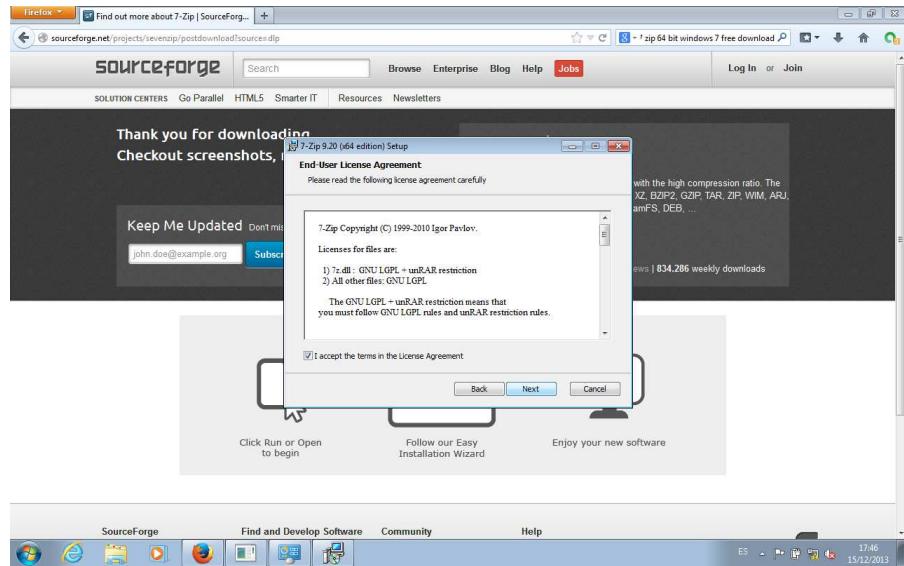
4. Click on the **Execute** button



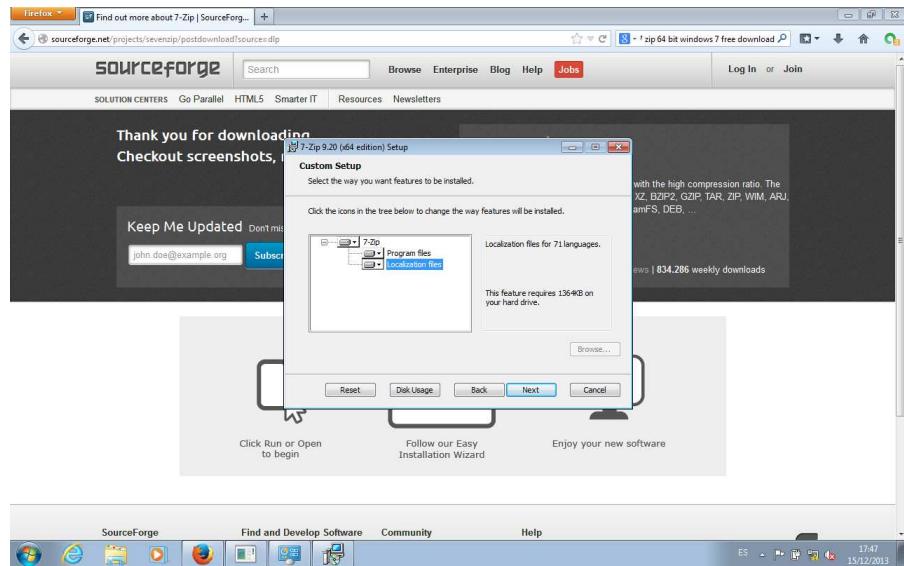
5. Click on the **Next** button



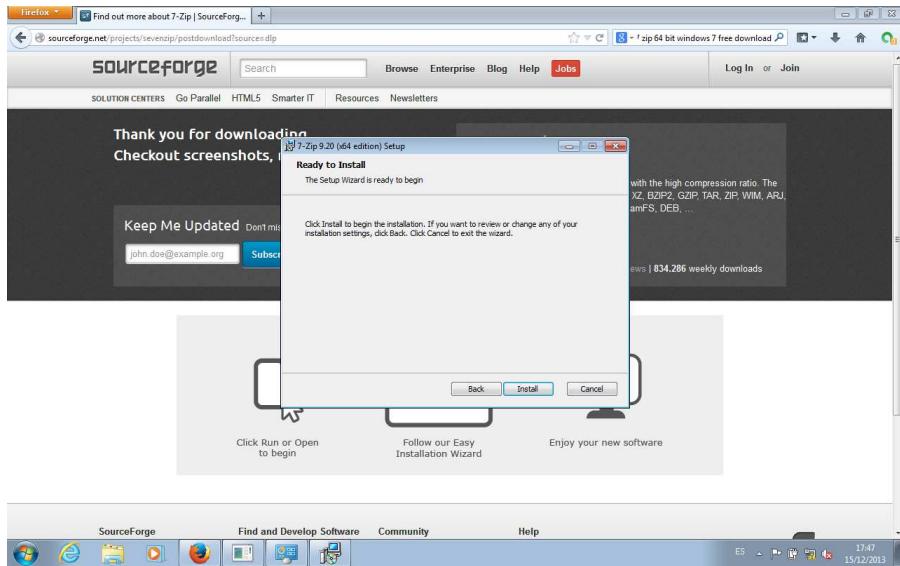
6. Accept the license and click on the **Next** button



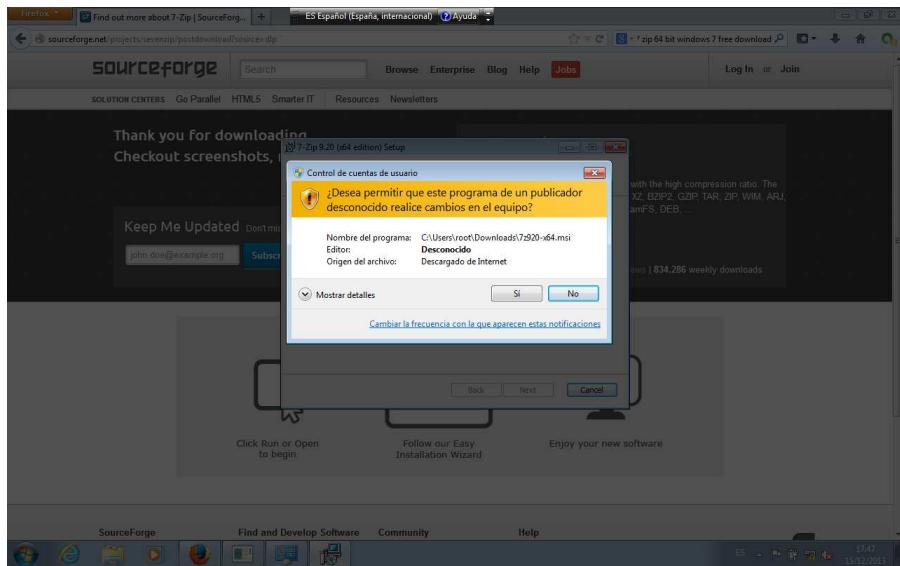
7. Customize the localization files and click on the **Next** button



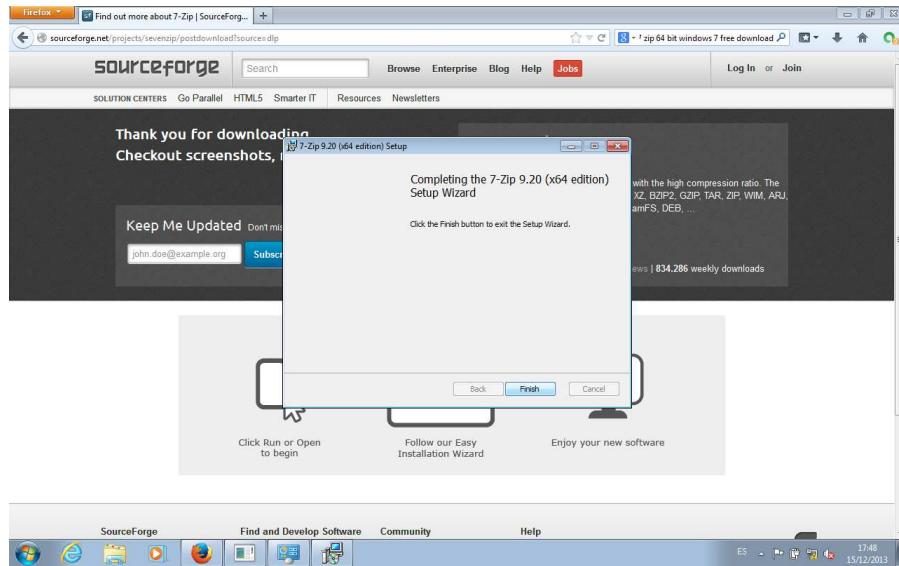
8. Click on the **Install** button



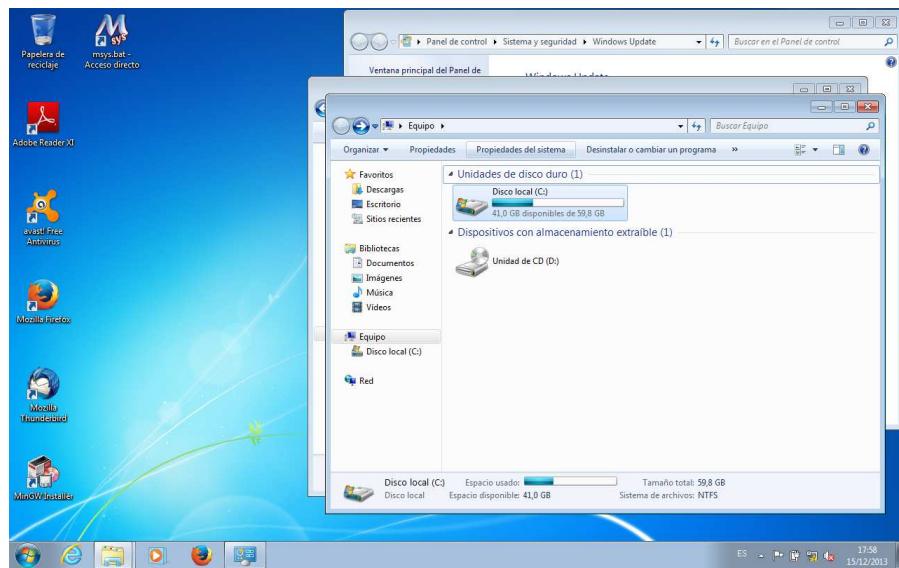
9. Click on the **Yes** button



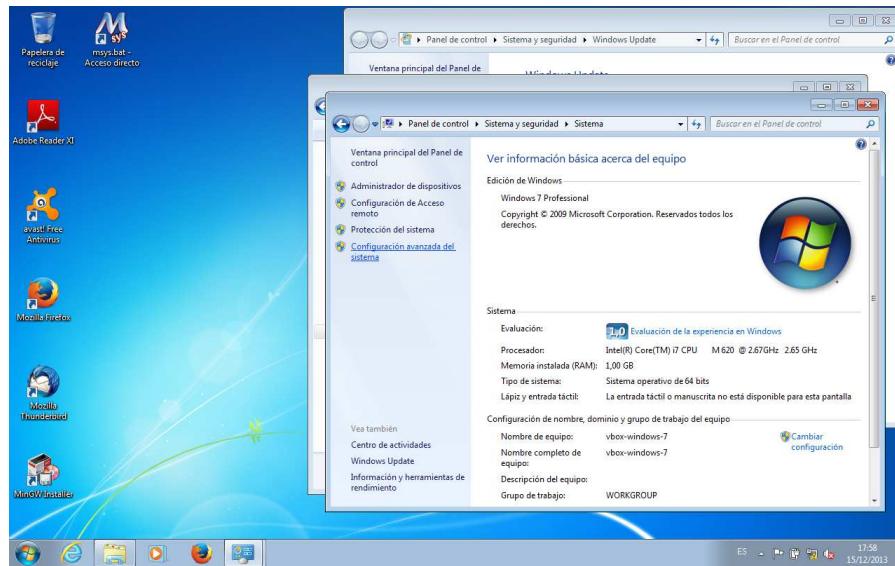
10. Click on the **Finish** button



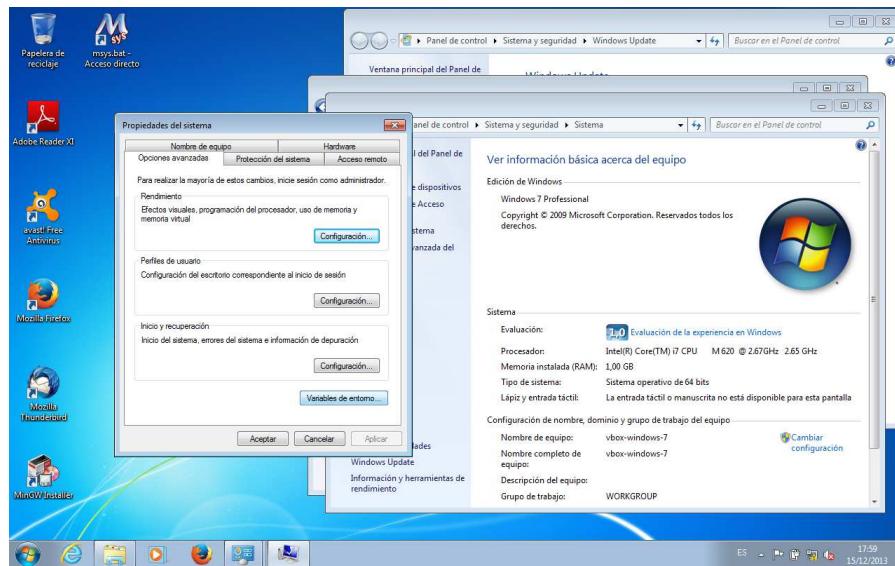
11. Go to **Computer** on the main menu and click on the **System properties** menu bar option



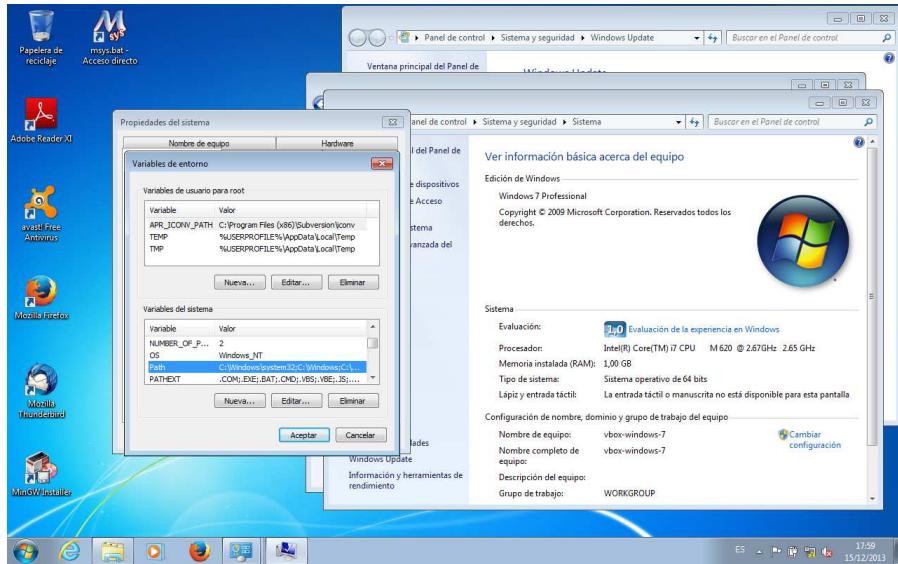
12. Click on the **Advanced system configuration** option



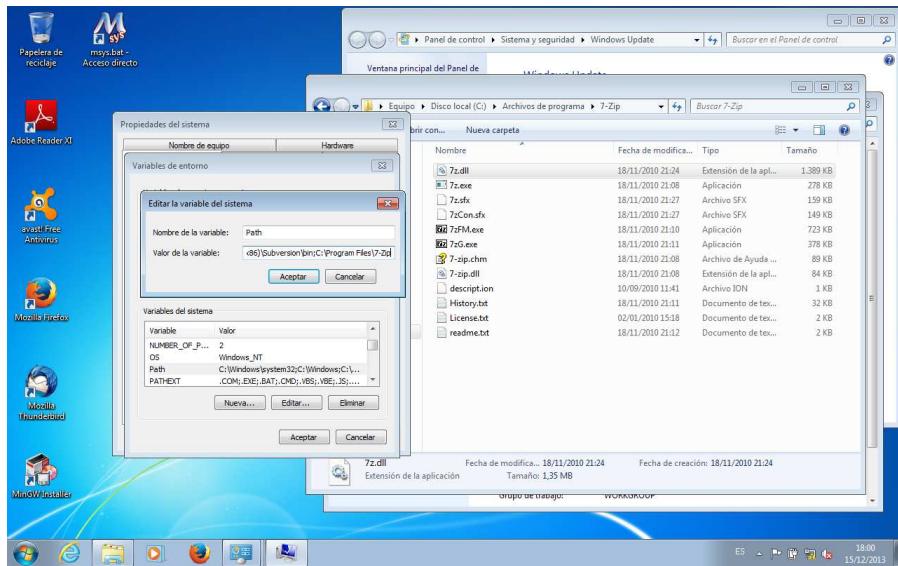
13. Click on the **Environment variables** button



14. Select Path on the System variables and click on the Edit... button



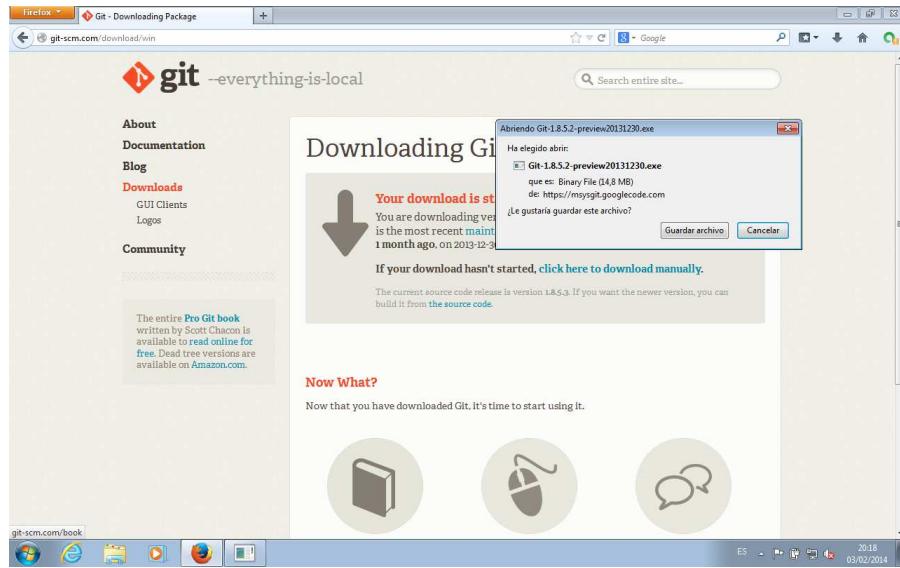
15. Append with a semicolon the path where the 7-Zip program has been installed (in this case C:\Program Files\7-Zip) and click on the Accept buttons



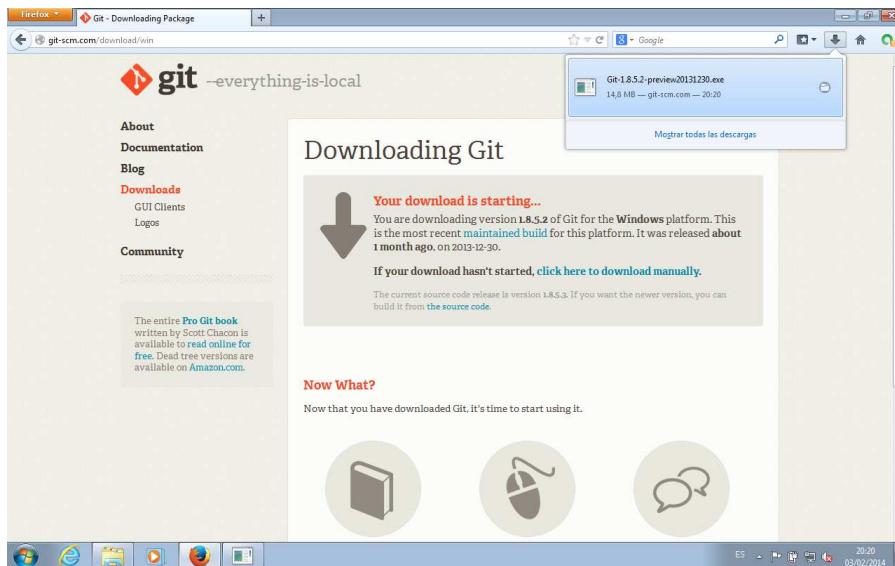
3 Installing Git

Git is a distributed revision control and source code management. In this section we install and configure it to be accessible in the MSYS terminal.

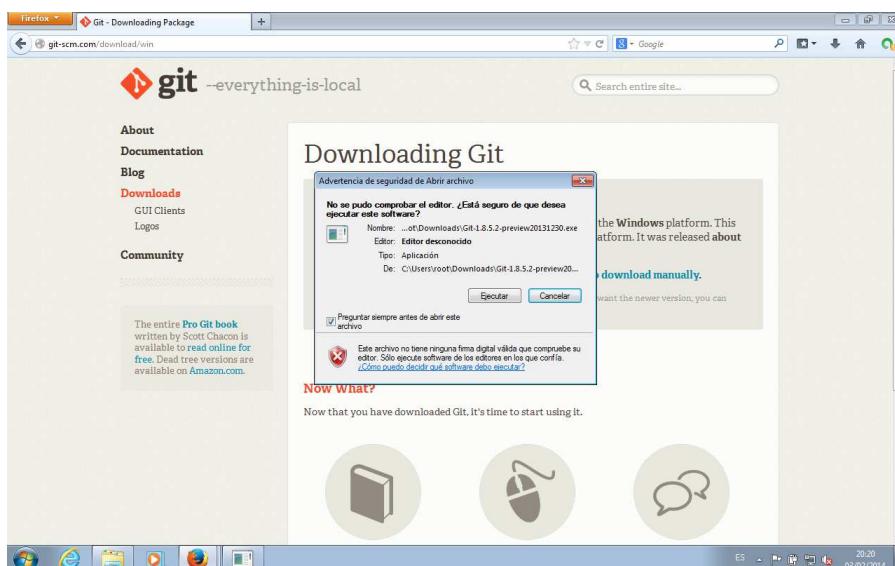
1. Download the Git installer on <http://git-scm.com/download/win> and click on **Save file** button



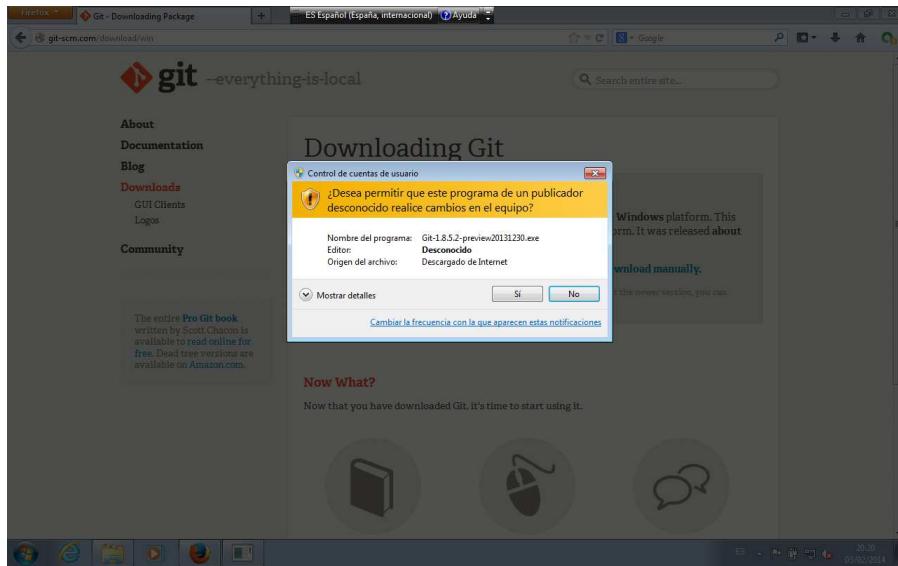
- Click on the downloaded installer ([Git-1.8.5.2-preview20131230.exe](#) is the last version at the date to make this tutorial)



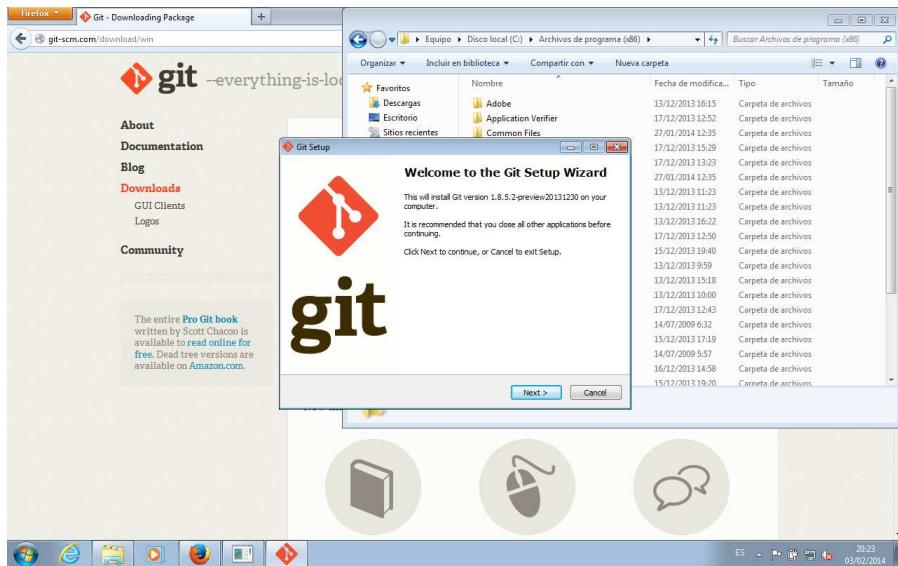
- Click on the Execute button



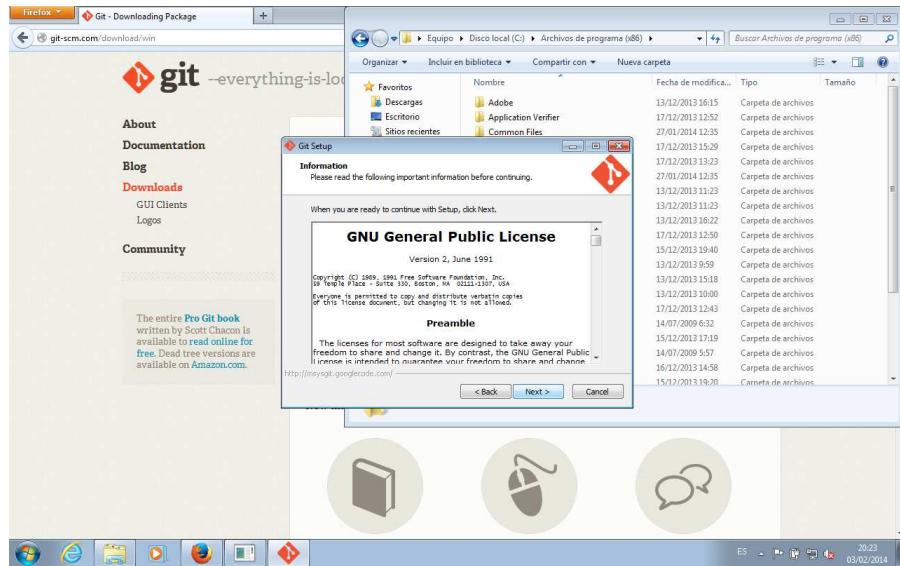
4. Click on the Yes button



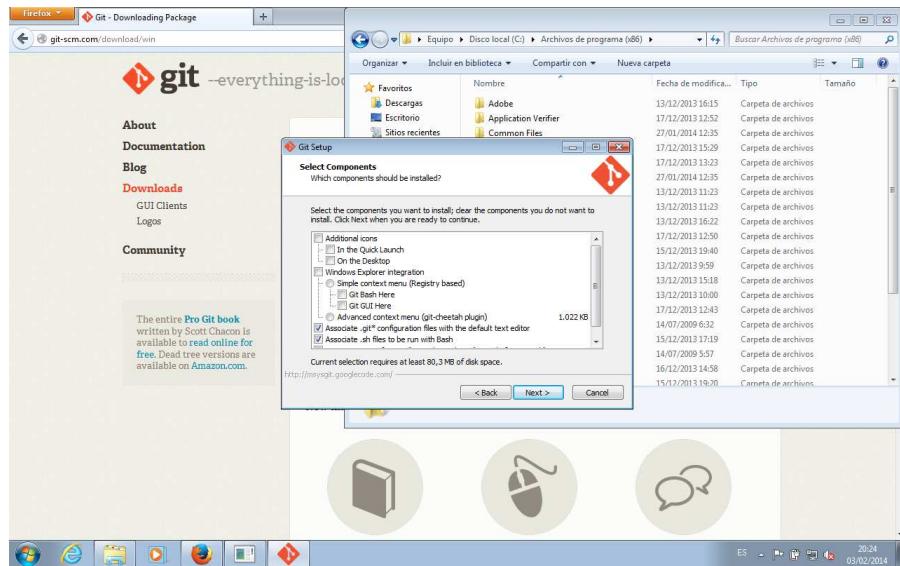
5. Click on the Next button



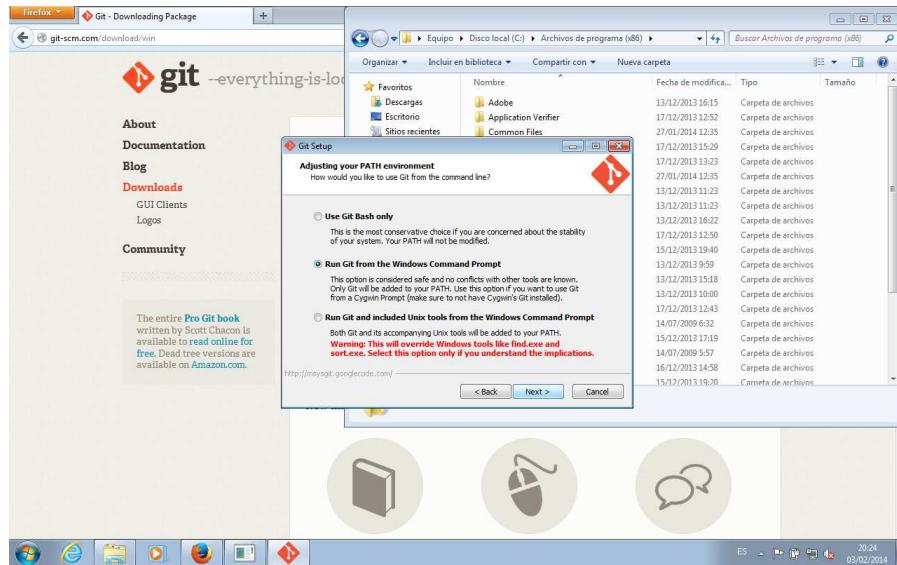
6. Click on the **Next** button



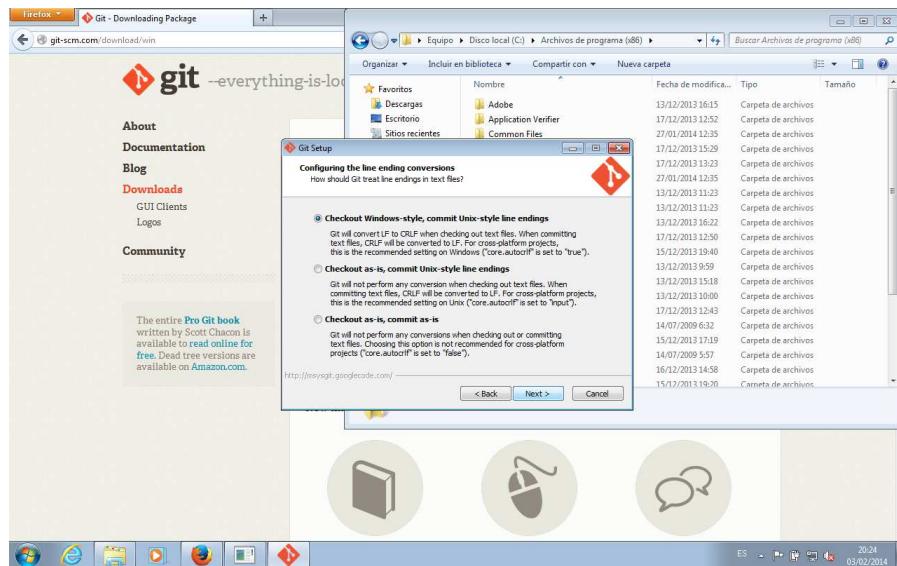
7. Select the components to install (we use the default) and click on the **Next** button



8. Select the Run Git from the Windows Command Prompt option and click on the Next button



9. Select the Checkout Windows-style, commit Unix-style line endings option and click on the Next button



4 Install MinGW 64 bits compiler and some useful libraries and tools

Here we install the MinGW 64 bits compiler and the following useful libraries and tools:

- GCC 4.8.2

