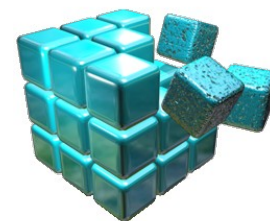


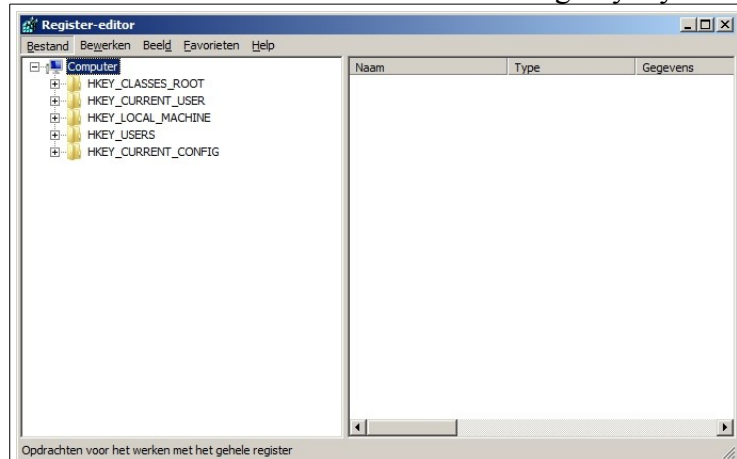
Chapter 3 – Using a (free downloadable) Registry Cleaner (called “Ccleaner”).



3.1 – The "Windows Registry", What is it?

The Windows operating system has *1 centralized place* where it stores (almost all) installation and configuration information. This place is called the "Registry" and is a sort of configuration database with 5 separate information branches/sections.

These information branches are called "Registry Hyves".



The Windows Registry consists of 5 hyves called:

- _ HKEY_CLASSES_ROOT
- _ HKEY_CURRENT_USER
- _ HKEY_LOCAL_MACHINE
- _ HKEY_USER
- _ HKEY_USER
- _ HKEY_CURRENT_CONFIG

Note:

I'm not going to cover the details in this tutorial. I just let you know *that* they exist and what you can do to clean it up from previous de-installation errors.

1 - The 5 branches inside the Window Registry.

3.2 – What physical files make up the Windows Registry?

The Windows Registry is made up of the following files, that you can find on your computers hard-disk:

Registry Hyve:	Filename:
HKEY_LOCAL_MACHINE\SAM	Sam.log, Sam.sav
HKEY_LOCAL_MACHINE\Software	Software, Software.log,
HKEY_LOCAL_MACHINE\System	System, System.alt, System.log,
HKEY_CURRENT_CONFIG	System, System.alt, System.log, System.sav,
HKEY_USERS\DEFAULT	Ntuser.dat, Default, Default.log, Default.sav
2 - Files that make up the Windows Registry Hyves.	

3.3 - Where are the Registry Hive files physically located on my computer?

A Registry Hive is a group of keys, subkeys and values in the registry that has a set of supporting files that contain backups of its data.

- The supporting files for all hives except HKEY_CURRENT_USER are in the **%SystemRoot%\System32\Config folder** on Windows NT 4.0, Windows 2000, Windows XP, Windows Server 2003, and Windows Vista.

- The supporting files for HKEY_CURRENT_USER are in the **%SystemRoot%\Profiles\<Username> folder**.
The file name extensions of the files in these folders indicate the type of data that they contain.

Also, the lack of an extension may sometimes indicate the type of data that they contain.



3 - Warning about manually editing the Windows Registry.

If you want to learn more (and in detail) about the Windows Registry, follow these links on the Internet:

3.4 - Articles to learn more about the Windows Registry

3.4.1 - Beginner level articles:

"How To Backup, Edit, and Restore the Registry in Windows 95, Windows 98, and Windows Me"

- <https://support.microsoft.com/en-us/kb/322754>

"How To Backup, Edit, and Restore the Registry in Windows NT 4.0"

<https://support.microsoft.com/en-us/kb/323170>

"How To Backup, Edit, and Restore the Registry in Windows 2000"

- <https://support.microsoft.com/en-us/kb/322755>

"How To Backup and Restore the registry in Windows XP, Vista, Win7, Win8, 8.1"

- <https://support.microsoft.com/en-us/kb/322756>

"How To Backup and Restore the registry in Windows 10"

- <http://www.ilovefreesoftware.com/06/windows-10/backup-restore-registry-windows-10.html>

"How to view the system registry by using 64-bit versions of Windows"

- <https://support.microsoft.com/en-us/kb/305097>

3.4.2 - Advanced level articles.

These articles are only intended for the real - and proven computer experts!

"Registry" (about, using, registry reference)

<https://msdn.microsoft.com/en-us/library/windows/desktop/ms724871%28v=vs.85%29.aspx>

"What Everybody Should Know About the Windows Registry"

- <http://www.techsupportalert.com/content/what-everybody-should-know-about-windows-registry.htm>

"Using Regedit.exe"

- http://www.microsoft.com/resources/documentation/windows/xp/all/proddocs/en-us/tools_regeditors.mspx?mfr=true

"Registry Editor overview" (Windows XP)

http://www.microsoft.com/resources/documentation/windows/xp/all/proddocs/en-us/regedit_o.mspx?mfr=true

"What is the Registry Editor" (Windows 7)

<http://windows.microsoft.com/en-us/windows/what-is-registry-editor#1TC=windows-7>

"Registry Editor" (Windows 7, Windows 8, Windows Server 2008 R2, Windows Server 2012)

<https://technet.microsoft.com/en-us/library/cc755256.aspx>

"Windows Registry information for advanced users"

- <https://support.microsoft.com/en-us/kb/256986>

"System and Startup Settings" (Windows 2000)

- <https://msdn.microsoft.com/en-us/library/bb742541.aspx>

"Registry troubleshooting steps for advanced users" (Windows XP)

- <https://support.microsoft.com/en-us/kb/822705>

"How to recover from a corrupted registry that prevents Windows XP from starting"

- <https://support.microsoft.com/en-us/kb/307545>

"Description of the Windows Registry Checker Tool (Scanreg.exe)"

- <https://support.microsoft.com/en-us/kb/183887>

"How to add, modify, or delete registry subkeys and values by using a .reg file"

- <https://support.microsoft.com/en-us/kb/310516>

"How to use the Regsvr32 tool and troubleshoot Regsvr32 error messages"

- <https://support.microsoft.com/en-us/kb/249873>

"Regsvr32 - This command-line tool registers .dll files as command components in the registry."

- <http://www.microsoft.com/resources/documentation/windows/xp/all/proddocs/en-us/regsvr32.mspx?mfr=true>

"INFO: How Regsvr32.exe Registers and Unregisters COM DLLs"

- <https://support.microsoft.com/en-us/kb/207132>

"Learn How to Use the Windows Registry Editor (Regedit) in One Easy Lesson"

- <http://www.techsupportalert.com/content/learn-how-use-windows-registry-editor-regedit-one-easy-lesson.htm>

"Registry Key to Disable UAC" (Windows Vista and up)

- <https://gallery.technet.microsoft.com/Registry-Key-to-Disable-UAC-45d0df25>

3.4.3 - Other free Registry Cleaner tools:

Wise Registry Cleaner Free:

- <http://www.wisecleaner.com/download.html>

Tony Arts – Easy Cleaner:

- <http://personal.inet.fi/business/toniarts/ecleaner.htm>

Powertools Lite:

- <https://www.macecraft.com/slides/powertools-lite-2013/>

Eusing Free Registry Cleaner:

- http://www.eusing.com/free_registry_cleaner/registry_cleaner.htm

Little Registry Cleaner:

- <http://sourceforge.net/projects/littlecleaner/>

CleanerSoft Registry fixer:

- http://www.cleansoft.com/registry_fix/free_registry_fix.htm

AML tools – Free registry cleaner:

- <http://www.amltools.com/>

JetClean:

- <http://www.bluesprig.com/jetclean.html>

Auslogic – Registry cleaner:

<http://www.auslogics.com/en/software/registry-cleaner/>

Auslogic – Registry defragmenter

- <http://www.auslogics.com/en/software/registry-defrag/>

3.4.4 - Other free Registry editing tools:

Registry Manager – Free home edition:

- <http://www.resplendence.com/downloads>

RegAnalyser:

- <https://www.safer-networking.org/dl/products/regalyzer/>

Regseeker:

- <http://www.hoverdesk.net/>

Registry Commander:

- <http://www.aezay.dk/aezay/regcmd/>

NirSoft:

http://www.nirsoft.net/windows_registry_tools.html

3.5 - How do I backup and restore the Windows Registry?

Find out your own version of Windows Operating system first.

See the links to the relevant "Backup and Restore" article online on page 2 of this chapter.

Always backup your Registry first! before proceeding with the rest of this chapter.

WARNING: Always Always make a backup copy of the Windows Registry, when you start working with it.

... So when you somethings screw up, you can always restore this working backup copy of your Registry and you can continue to use your computer as usual.

Otherwise you could end up doing a "Format C:"and a complete reinstallation of your computer, laptop, tablet or other Windows device!

You are hereby seriously warned!

Proceed at your own risk!

3.6 - Why do I need to cleanup my computers Registry?

Installation programs (for example FSX, IvAp, IvAc, MTL, TeamSpeak) write their information into the Registry.

The Registry information helps other programs on your computer to:

- find the installed programs (back) on your computer's hard-disk,
- find the settings of the already installed programs,
- to communicate with the installed programs and each-other,
- some other, very more detailed settings (which do not fall under the scope of this tutorial).

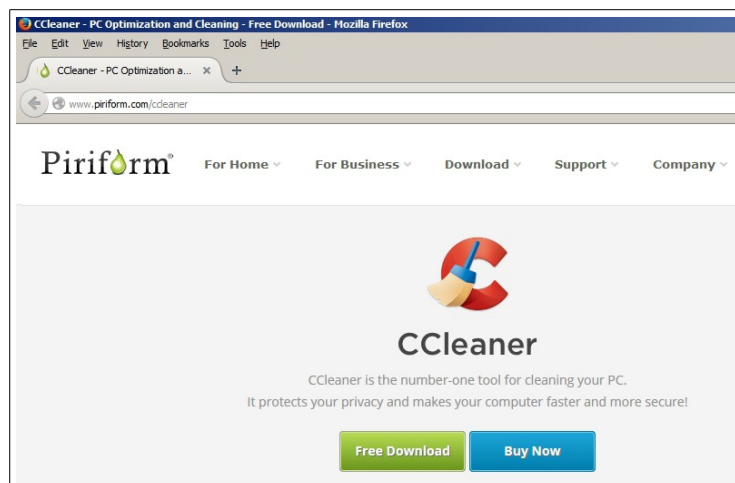
De-installation programs mostly remove all information that they themselves have written into the Registry.....

BUT.... sometimes these de-installation programs screw things up / make a mess of this task and do not remove everything they have installed completely again.

From that moment on it can get messy... since the Windows Registry contains the wrong information / broken links to other programs. This is a common cause when other programs show errors on screen.

3.7 - How can I cleanup/ repair my Windows Registry?

On the internet you can find a couple of free registry cleanup and /or repair programs. The one I choose to use in this tutorial "CCleaner", since it is easy to download, instal and use. Off-course there more advanced (free) registry-cleaners, but I want to keep things *simple* for this tutorial. Use the others at your own risk!



Downloading the CCleaner program:

Surf to www.piriform.com

Click on the **[Download]** button

>> next screen appears.

Click on the **[Free download button]**

>>

Choose the Free version.

>>

Click on the **[Download]** button

>> Download box appears

Save the download file on your computer.

4 - CCleaner website at <http://www.piriform.com>.



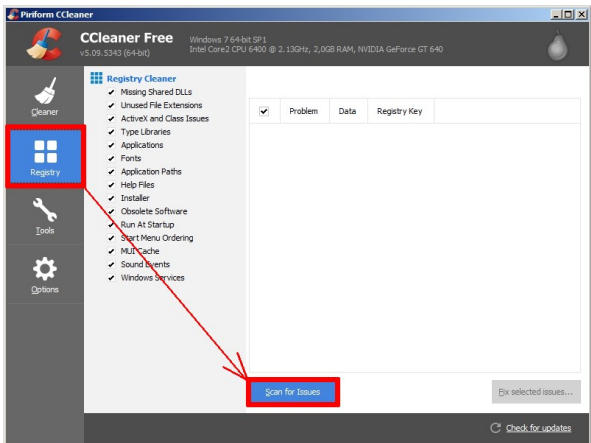
Installing the CCleaner program:

Scan the download file FIRST on viruses, mal-ware.

Start the installer and install CCleaner in the following folder "**C:\Program Files\CCleaner**"

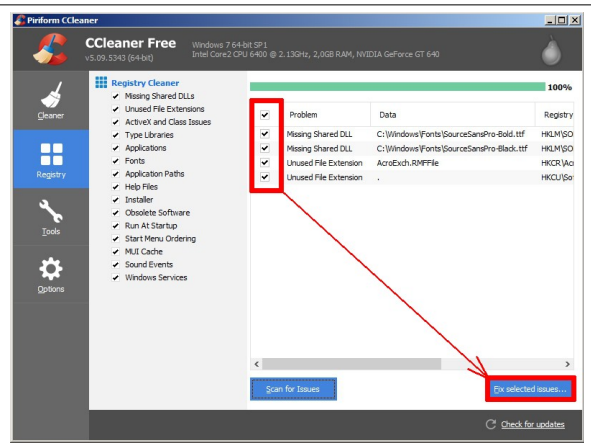
5 - CCleaner installation screen.

3.8– Using CCleaner to clean up / repair my Windows Registry.



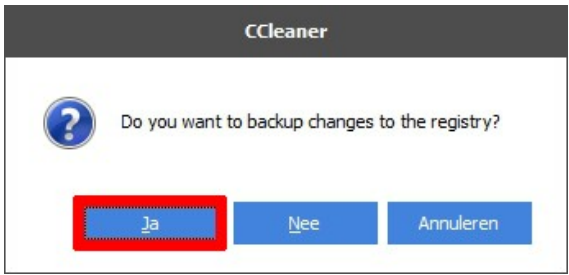
Startup CCleaner.
Choose **[Registry]** menu at the left side of the screen.
Click the **[Scan for issues]** button.
>> CCleaner is now searching your registry for errors.
>> CCleaner presents the search results on screen.

6 - Choose the [Registry] menu option.



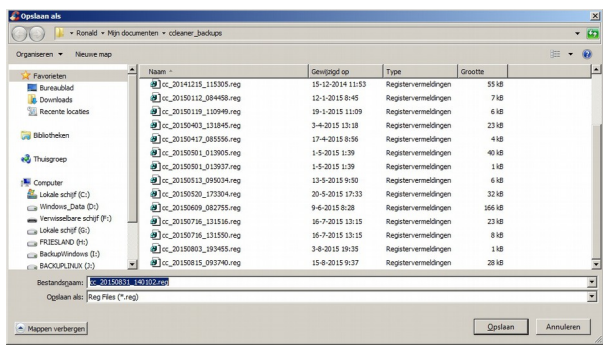
Select all found errors at the middle of the screen.
Click the **[Fix selected issues]** button
>> CCleaner presents the search results on screen.

7 – Select all found Registry errors.



>> CCleaner asks you to backup the changes (or not).
Click on the **[Yes]** button to backup the changes.

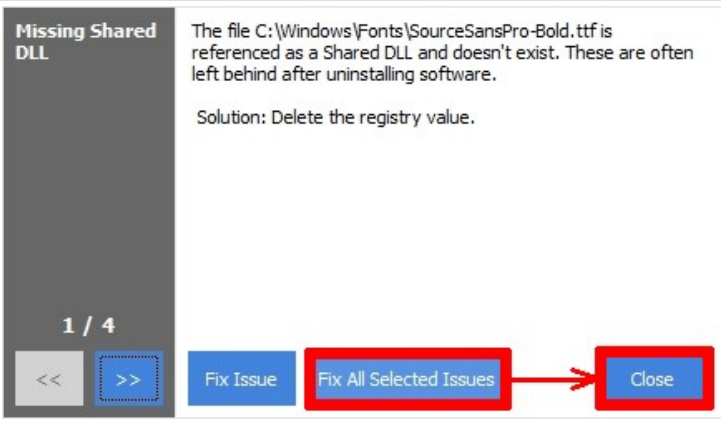
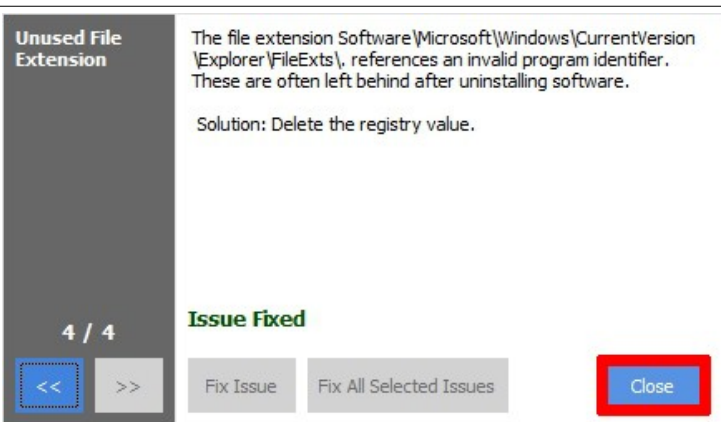
8 – Click [Yes] to make a backup of the changes.



>> CCleaner presents a dialog box for a:
- Changes backup file name.
- Changes backup file location.

Provide the backup file name and location.
Click on the **[Save]** button to save the backup.

9 – Give a folder and filename to save the changes.

	<p>>> CCleaner asks which errors needs to be fixed? Click the [Fix All selected issues] button.</p>
<p>10 – Click [Fix All Selected Issues] and then [Close].</p>	
	<p>>> CCleaner now repairs all selected errors. Click the [Close] button to exit this section. Click the [X] to close CCleaner application again.</p>
<p>11 – Click [Close] to exit Ccleaner.</p>	

Congratulations, you have just successfully cleaned your own Windows Registry!

Now log out of Windows and shutdown your pc completely.

Reboot you pc, to be sure that everything is still in working order.

Log back into Windows again

.. to be able to continue this trouble-shootings-tour with a cleaned Windows Registry.