6

Downloading and Installing Scilab

To conclude this presentation of the Scilab software, here is additional information that you may find useful during the Scilab download and installation process.

6.1. Where to find Scilab?

Scilab's official website (see Figure 6.1) is without doubt the prime location to find all information on Scilab.

Figure 6.1 : Scilab's official website



A link on the homepage redirects to the download page which provides access to the latest Scilab versions for the three main operating systems (Windows, Linux et Mac OS).

Caution > When downloading the Windows or Linux versions, you need to choose the version that best fits your processor's architecture:

- For a 32 bits Windows or Linux architecture, only the Scilab 32 bits version should be installed.
- For a Linux 64 bits architecture, install the Scilab 64 bits version.
- For Windows 64 bits, you can install either the 32 or 64 bits version. However, the Scilab 64 bits version is recommended to optimize the software performance.
- For MAC OS users, only one Scilab version is available.

In Linux, you can also download and install Scilab through a package manager such as Synaptic.

Figure	6.2 :	Installing	Scilab	through	Syna	ptic
<u> </u>						

C 🎯 Reload Mark All Upgra	des	Apply Properties	Quick filter scllab	Q Search	
.u	s	Package	Installed Version	Latest Version	Description
mateur Radio (universe)		scilab	5.5.0-2	5.5.0-2	Scientific software package for numerical computations
ommunication		python-sciscipy		1.0.1-1	Python binding of Scilab
ommunication (multiverse		scilab-cli	5.5.0-2	5.5.0-2	Scientific software package - Command Line Interpreter
ommunication (universe)		scilab-plotlib		0.42-1	"Matlab-like" Plotting library for Scilab
onverted From RPM by Ali		scilab-full-bin-dbg		5.5.0-2	Scientific software package (scilab debugging symbols)
ross Platform		cantor-backend-scilab		4:4.13.3-0ubuntu0.	Scilab backend for Cantor
ross Platform (multiverse		collab motanot		0.6.1.7	Seilah graphs and naturarks computations module
Sections Status Status	Sc G Sci Sc da etc	entific software packag et Screenshot Get Change ilab is a matrix-based scient ilab contains hundreds of bi- ta structures (including poly c) and comes with a numb- ocercing	e for numerical con log Visit Homepage ific software package. uilt-in mathematical fur ynomials, rationals, line er of specific toolboxes	nputations actions, rich ar systems, lists, ; for control, signal	
Origin	pi	ocessing,			
Custom Filters	This package also provides Xcos, a graphical editor to design hybrid				
Search Results	dynamical systems models. Models can be designed, loaded, saved, compiled and simulated.				
Architecture	Stable and efficient solution for industrial and academics needs, Xcos				

Caution > Synaptic often does not offer the most up to date versions of Scilab (or of its associated packages). For this reason, it may be preferable to perform a manual installation.

In some cases, you may also need to install different versions of Scilab, for example to get around certain bugs. On the same site, you can find:

- older version of Scilab which can be requested via a form (the list of Scilab versions is available on the Scilab website)
- development versions, called Nightly Builds since they are compiled each night. They can be convenient to check if a recently reported bug was correctly fixed

Caution > The quality of these versions does not match the official version and should not be used in production!

sporadic alpha or beta versions to test new developments prior to major updates

Since 2008, Scilab has been open source under a license issued by CEA (Atomic Energy and Alternative Energies Commission), CNRS (the French National Centre for Scientific Research) and INRIA (the French Institute for Research in Computer Science and Automation), called CeCILL, which is also compatible with the GPL license. In fact, Scilab's source code is accessible and modifiable! Scilab's development is managed through the Git tool that provides access to the source code which can be viewed by everyone and modified by contributors. The Scilab source code is accessible from http://cgit.scilab.org and http://gitweb.scilab.org (see Figure 6.3).

projects / scilab.gi	/ summary	
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3 hours ago Sylvestre Ledru 7 hours ago Sylvestre Ledru 26 hours ago Paul BIGNIER 27 hours ago Sinon Marchell 2 days ago Ruin Hinckawa 2 days ago Vaul Hinckawa 2 days ago Vaul Hinckawa 2 days ago Paul BIGNIER 5 days ago Paul BIGNIER 5 days ago Adeline CARUI: 5 days ago Charlotte HECC 5 days ago Simon GARES 5 days ago Simon GARES 5 days ago Paul BIGNIER 5 days ago Paul BIGNIER	in some contexts (errors in the macros for- * Bug #7056 fixed - call_ScilabOpen, Term added japanese translation of hdf5, 2233 Sparse help: fix lusolve calling sequence 177 * Bug #72515 fixed - Caplicabopen, Term added japanese translation of hdf5, 2233 Sparse help: fix lusolve calling sequence 1787 * Bug #72515 fixed - Valid function names * Bug #72465 fixed - Valid function names * Bug #72465 fixed - Linear, algebra: DGELS Linear_algebra: giving UGELSY and ZGEL 5 Fix Windows compliation (221622) UET * Bug #7255 fixed - chart tagged as obsolet UET * Bug #7256 fixed - lustif([], position) retu E fixing bugs 12070 and 12413 - we can now Minor typos in statistics module (211647) * Bug #7256 fixed - Linabiling %nan, %inf an	example

Figure 6.3 : Accessing the Scilab source code from gitweb

Figure 6.4 : Comparing versions on gitweb



6.2. Installation

Once the appropriate binary file is downloaded, the installation is very simple. In accordance with your operating system:

• For Windows, execute the scilab-*.exe file, for example by double-clicking on the file icon from the file explorer. Then follow the instructions in the different windows (see Figure 6.5).

Figure 6.5 : Installing Scilab on Windows

Setup - scilab-5.5.2 (64-bit)	
Sci Lab	Welcome to the scilab-5.5.2 (64-bit) Setup Wizard This will install scilab-5.5.2 (64-bit) on your computer. It is recommended that you dose all other applications before continuing. Click Next to continue, or Cancel to exit Setup.
	Next > Cancel

- In Linux, if you perform a manual installation, extract the scilab-*.tar.gz file in the specific directory where you wish to install Scilab. For example, execute the command tar xvf scilab-5.5.2.tar.gz -C /usr/ from a terminal (you can also choose a directory other than /usr/ and make sure you have administrative rights).
- On MacOS, drag the scilab-*.dmg file icon (image of downloaded disk) to the Applications folder to launch the MacOS applications installer (see Figure 6.6).

Figure 6.6 : Installing Scilab on Mac OS

00		scilab-5.5	5.2	
Scilab S To install, dra You may ther	5.5.2 ag the Scilab 5.5.2 he n eject the mounted v	ad to your Applicatio olume and throw av	ons folder. vay this disk image.	
scilab-5.	.5.2	Applications	Scilab5.5.2_ReleaseN pdf	otes.
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Scilab				

During the Scilab installation, and depending on your operating system, a group of files and programs are installed in a given directory. To find their location, follow the path:

- C:/Program*/Scilab-*.*.*/ if you use Windows
- /usr/Scilab-*.*.*/ if you use Linux

• /Applications/Scilab.app/Contents/MacOS/share/scilab/ if you use Mac OS

From now on, we will refer to Scilab's installation directory as SCI. It contains, among other things, two important directories:

- SCI/bin/, which contains Scilab's main executables
- SCI/contrib/ which in the future will contain supplementary modules

6.3. Executables and launch options

The executable file that is used to launch Scilab is located in the SCI/bin/ directory. It is called:

- scilab in Linux or Mac OS
- WScilex.exe in Windows

If you wish to create shortcut to start Scilab, you need to point to one of these files. Once you launch the correct executable, Scilab's main window will appear as shown in Figure 2.1. You can also launch Scilab straight from your operating system's command-line interpreter by calling the executable file above. In this case, several launch options are available:

- scilab -nwni: launches Scilab in the terminal to use through the command-line without loading the graphics features.
- scilab -nw: launches Scilab in the terminal to use through the command-line while loading advanced features such as graphics.
- scilab -e 'command': launches Scilab and silently executes the command Scilab during startup.
- scilab -f file.sce: launches Scilab and silently executes the commands file file.sce (also see Chapter Scripts).

Figure 6.7 : Launching Scilab from a command prompt



Tip > You can also find files located in the SCI/bin/ directory that let you execute Scilab directly from a terminal:

- On Windows, Scilex.exe performs the equivalent of launching Scilab with the option -nwni.
- On Linux or Mac OS:
 - scilab-cli corresponds to launching Scilab with the -nwni option
 - scilab-adv-cli corresponds to launching Scilab with the option -nw.

There are also more advanced options:

- scilab -ns starts Scilab without the start file scilab.start (see Chapter Scripts).
- scilab -nouserstartup starts Scilab without loading the user start files SCIHOME/.scilab or SCIHOME/scilab.ini (see Chapter Scripts).
- scilab -nb starts Scilab without displaying the welcome banner.
- scilab -1 language launches Scilab while configuring the user language, for example "fr" for french.
- scilab -mem N launches Scilab while setting the stack size N (memory allocated to Scilab).
- scilab -version displays a window with the Scilab version before returning control.

Caution > When launching Scilab from the command-line, the current directory is the one from which the command *scilab* (or *Wsilex*) is called.

Figure 6.8 : Launching Scilab with the -version option



Tip > If Scilab's user interface language does not suit you, this parameter can be changed at any time from the preferences editor (see Figure 2.3). You can also retrieve and modify this data from the command-line with getlanguage and setlanguage.

```
-->// retrieve the Scilab interface language
-->getlanguage() // in English at first
ans =
en_US
-->// modify Scilab interface language
-->setlanguage('fr_FR') // change to French
ans =
T
```