



Installing Rtools

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What is Rtools?

- A collection of tools necessary for building R packages in Windows
- Available for download at <http://cran.r-project.org/bin/windows/Rtools/>

Building R for Windows

This document is a collection of resources for building packages for R under Microsoft Windows, or for building R itself (version 1.9.0 or later). The original collection was put together by Prof. Brian Ripley; it is currently being maintained by Duncan Murdoch.

The authoritative source of information for tools to work with the current release of R is the "R Administration and Installation" manual. In particular, please read the "[Windows Toolset](#)" appendix.

Rtools Downloads

With the change to gcc 4.2.1, some of the tools for 32 bit compilers become incompatible with obsolete versions of R. Since then we have been maintaining one actively updated version of the tools, and other "frozen" snapshots of them. We recommend that users use the latest release of Rtools with the latest release of R.

The current version of this file is recorded here: [VERSION.txt](#)

Download	R compatibility	Frozen?
Rtools31.exe	R 3.0.x to 3.1.x	No
Rtools32.exe	R >2.15.1 to R 3.0.x	Yes
Rtools412.exe	R >2.14.1 to R 2.15.1	Yes
Rtools414.exe	R 2.13.x or R 2.14.x	Yes
Rtools413.exe	R 2.13.x	Yes
Rtools412.exe	R 2.12.x	Yes
Rtools411.exe	R 2.10.x or R 2.11.x	Yes
Rtools410.exe	R 2.9.x or 2.10.x	Yes
Rtools409.exe	R 2.8.x or R 2.9.x	Yes
Rtools408.exe	R 2.7.x or R 2.8.x	Yes
Rtools407.exe	R 2.6.x or R 2.7.x	Yes
Rtools406.exe	R 2.6.x, R 2.5.x or (untested) earlier	Yes

The change history to the Rtools is [below](#).

Tools for 64 bit Windows builds

Rtools 2.12 and later include both 32 bit and 64 bit tools.

Most of the tools used for 32 bit builds work fine as well for 64 bit builds, but the gcc version may be different, and it has changed a number of times.

R-patched subsequent to Jan 22, 2012, R-devel, and releases after 2.14.1 will use a new toolchain based on pre-4.6.3 gcc, put together by Prof. Brian Ripley and available as multi-rip on [his web page](#). Rtools 2.15 includes this toolchain. It uses the same gcc version for both 32 and 64 bit builds. Separate versions of the glib debugger are also included for each architecture.

Current builds of R 2.13.x and R 2.14. (0.1) use a release based on pre-4.5.2 gcc. Rtools 2.14 includes binaries put together by Prof. Brian Ripley and available from [his web page](#). To install these, select the "MinGW64" component when installing Rtools.

For the later R 2.11.x versions, we used the MinGW-w64 version based on pre-4.4.4 gcc, which was available from Prof. Ripley as [http://www.stat.csi.ac.uk/pub/Rtools/oldV64Toolchain.zip](#). We also used this version for development builds of R 2.12.0 up to July 20.

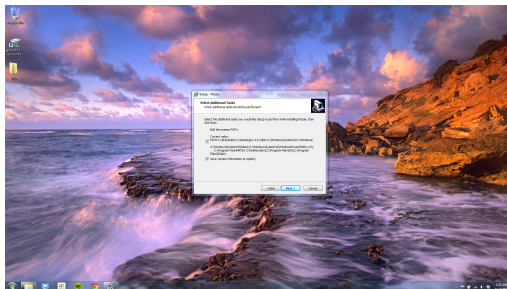
R 2.11.0 used http://sourceforge.net/projects/mingw-w64/files/Toolchain%20targetting%20Win64/Download%20Win64/mingw-w64-1.0-bin-mingw_20100302.zip, but this is apparently no longer available for download.

Download Rtools

- Select the .exe download link from the table that corresponds to your version of R
 - Note: If you're not sure what version of R you have, open or restart R and it's the first thing that comes up in the console
- If you have the most recent version of R, you should select the most recent Rtools download (at the top of the chart)
- Once the download completes, open the .exe file to begin the installation

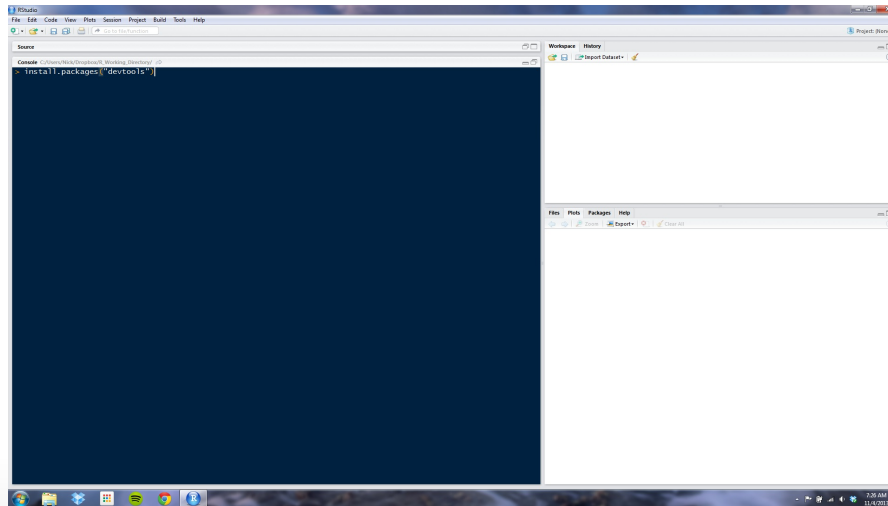
Install Rtools

- Unless you really know what you are doing, you should just go with the default selections at each step of the installation
- There are only two exceptions worth noting:
 - If you already have Cygwin installed on your machine, you should follow the instructions given during installation (and linked to here: <http://cran.r-project.org/bin/windows/Rtools/Rtools.txt>)
 - *IMPORTANT: You should make sure that the box is checked to have the installer edit your PATH (see below).*



Install devtools

- Once the Rtools installation completes, open RStudio
- Install the devtools R package if you have not previously done so
 - If you aren't sure, enter `find.package("devtools")` in the console
- To install devtools, use `install.packages("devtools")`



Verify Rtools installation

- After devtools is done installing, load it using `library(devtools)`
- Then type `find_rtools()` as shown below
- This should return **TRUE** in the console if your Rtools installation worked properly

The screenshot shows the RStudio interface. The console window on the left displays the following output:

```
install.packages("devtools")
Installing package into 'C:/Users/Nick/Documents/win-library/3.0'
(as 'lib' is unspecified)
trying URL 'http://cran.rstudio.com/bin/windows/contrib/3.0/devtools_1.3.zip'
Content type 'application/zip' length 230115 bytes (233 Kb)
opened URL
downloaded 233 Kb

package 'devtools' successfully unpacked and MD5 sums checked

The downloaded binary packages are in
C:/Users/Nick/AppData/Local/Temp/ktmp21ePUP/downloaded_packages
> library("devtools")
> find_rtools()
[1] TRUE
>
```

The right-hand pane of RStudio is empty, and the status bar at the bottom shows the time as 7:27 AM on 11/4/2015.