

Installing R and Optional RStudio

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1 Installing R

R is quickly becoming the statistical software of choice for researchers and analysts in a variety of disciplines. In recent years, it has surpassed many commonly used statistical programs in both number of users and availability of statistical methods. A fundamental difference between R and other statistical software packages is that R is open-source, meaning it is both free for download and the source code is available under the [GNU General Project License](#). Anyone can contribute new techniques or analytical methods, which has been a primary factor enabling the growth of R. These contributions are called ‘packages’. Currently, almost 6000 packages are available for R.

Installing R is straightforward. The source binaries (i.e., installation files) are available at www.r-project.org. Note that installation will require administrative privileges. After successful installation, all packages that have been developed as supplementary to those included in the base installation can be installed without administrative rights. Because R is open source, the source binaries and supporting packages are not hosted in a single location. Before the files are downloaded, a mirror where the files are hosted must be chosen. Additional package installations will also require selecting a mirror. The mirror is part of CRAN, or Centralized R Archive Network, which is a network of all available locations that have the R source files and packages. The following is a step-by-step guide to installing R through this network. Package installation will be covered later.

1. Visit the R website using a web browser: www.r-project.org.

The R Project for Statistical Computing

PCA 5 vars
prcomp(x = data.csv = cor)

Clustering 4 groups

Factor 1 [41%]

Factor 3 [19%]

Getting Started:

- R is a free software environment for statistical computing and graphics. It compiles and runs on a wide variety of Windows and MacOS. To [download R](#), please choose your preferred [CRAN mirror](#).
- If you have questions about R like how to download and install the software, or what the license terms are, please [to frequently asked questions](#) before you send an email.

2. On the main page, select the [CRAN](#) link from the menu on the left.

[About R](#)
[What is R?](#)
[Contributors](#)
[Screenshots](#)
[What's new?](#)
Download, Packages
[CRAN](#)
[R Project](#)
[Foundation](#)
[Members & Donors](#)
[Mailing Lists](#)
[Bug Tracking](#)
[Developer Page](#)
[Conferences](#)
[Search](#)

3. Select a mirror from which the R files will be downloaded. It is best to choose a location that is closest to you.

CRAN Mirrors

The Comprehensive R Archive Network is available at the following URLs, please choose a location close to you. Some statistics on the status of the mirrors can be found here: [main page](#), [windows release](#), [windows old release](#).

0-Cloud	http://cran.rstudio.com/	Rstudio, automatic redirection to servers worldwide
Argentina	http://mirror.fcaglp.unlp.edu.ar/CRAN/ http://r.mirror.mendoza-conicet.gob.ar/	Universidad Nacional de La Plata CONICET Mendoza
Australia	http://cran.csiro.au/ http://cran.ms.unimelb.edu.au/	CSIRO University of Melbourne
Austria	http://cran.at.r-project.org/	Wirtschaftsuniversitaet Wien
Belgium	http://www.freeststatistics.org/cran/	K.U.Leuven Association

4. Select the installation option for your operating system.

Download and Install R

Precompiled binary distributions of the base system and contributed packages. **Windows and Mac** users most likely want one of these versions of R:

- [Download R for Linux](#)
- [Download R for \(Mac\) OS X](#)
- [Download R for Windows](#)

R is part of many Linux distributions, you should check with your Linux package management system in addition to the link above.

5. Select the base option if this is your first time installing R. The contrib option is a link to the source code for all available packages, which can be installed later from within R.

R for Windows

Subdirectories:

base	Binaries for base distribution (managed by Duncan Murdoch). This is what you want to install R for the first time .
contrib	Binaries of contributed packages (managed by Uwe Ligges). There is also information on third party software available for CRAN Windows services and corresponding environment and make variables.
Rtools	Tools to build R and R packages (managed by Duncan Murdoch). This is what you want to build your own packages on Windows, or to build R itself.

6. Select the download link. A .exe file will be downloaded to the default download location for your computer.

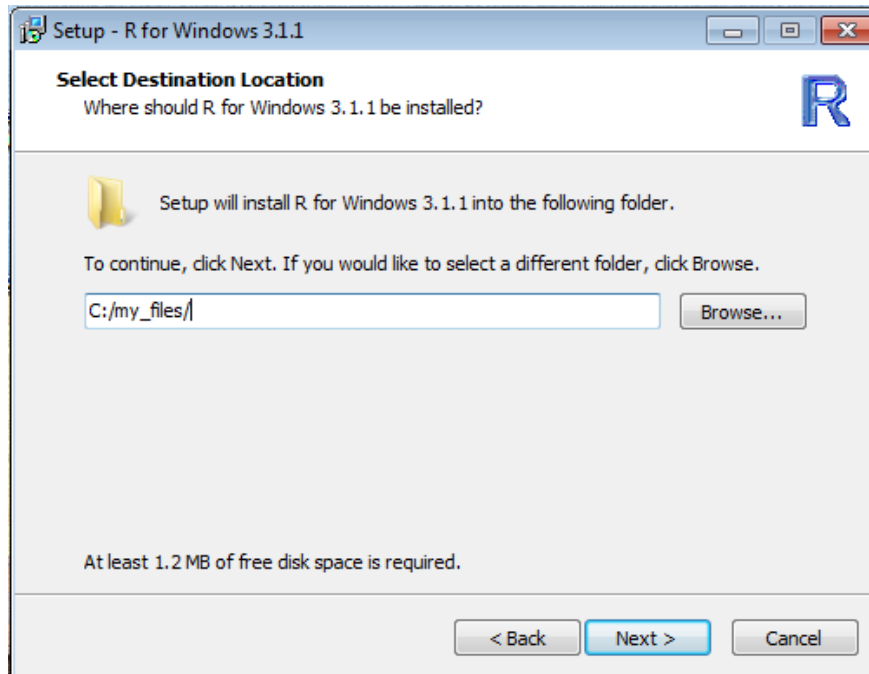
R-3.1.1 for Windows (32/64 bit)

[Download R 3.1.1 for Windows](#) (54 megabytes, 32/64 bit)

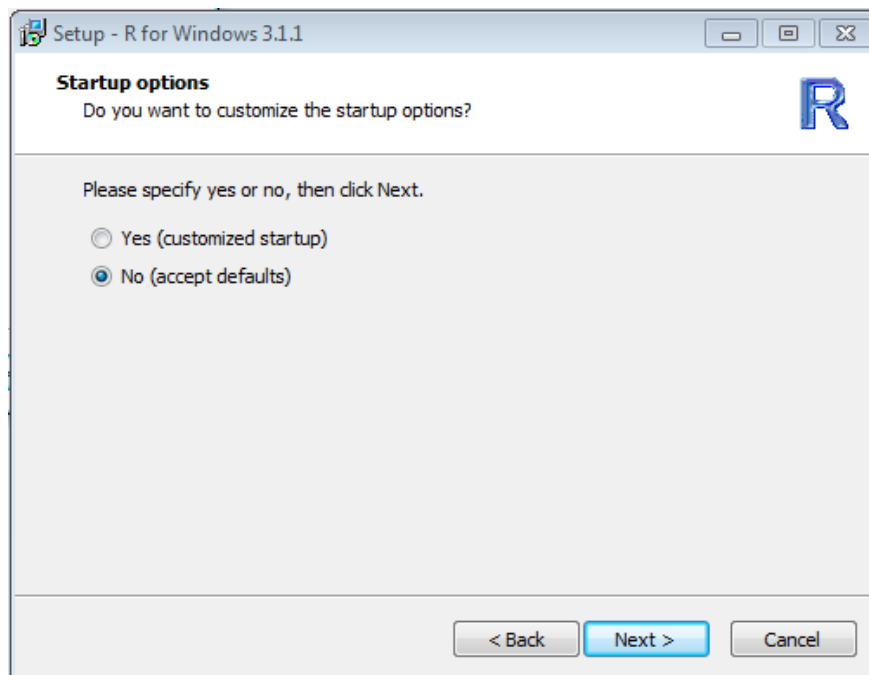
[Installation and other instructions](#)

[New features in this version](#)

7. Locate the .exe file that you just downloaded and double-click to begin installation. It should be named 'R-3.1.1.win.exe' or something similar.
8. Follow the installation instructions. This step may require administration rights.
9. A few points are worth mentioning during the installation process:
 - You will be prompted to select an installation path for R. It is best to choose a folder for which you have read/write privileges. You may wish to change some of the settings for R at a later date, and this is easiest if R is installed in a folder that you can access.



- You may also wish to customize the startup options for R. It is fine to select the defaults, but you may want to tailor the options based on your preferences.

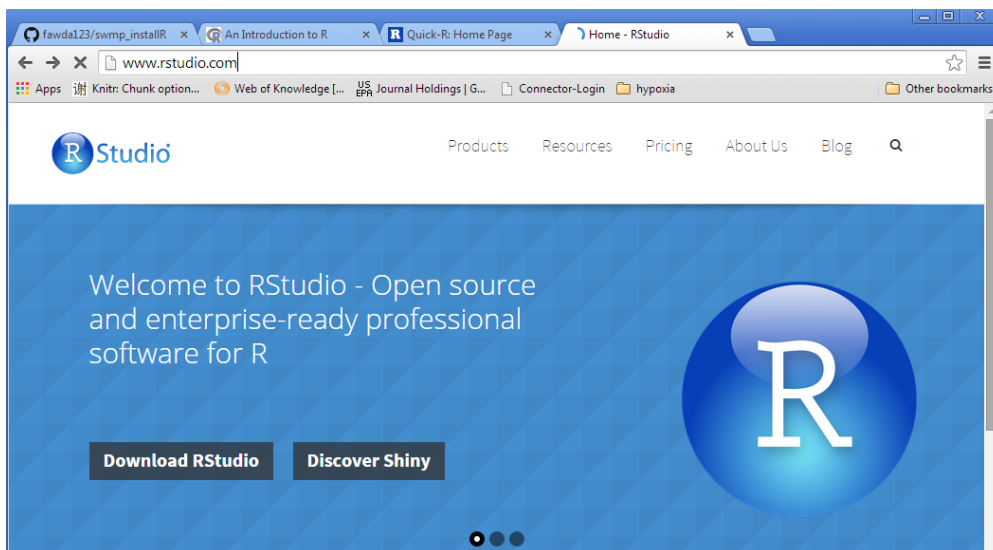


10. You should be able to use R after the installation process is complete. We will cover R basics at a later date.

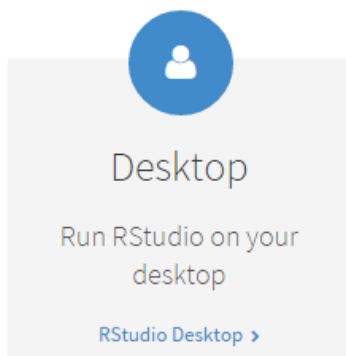
2 Installing RStudio - optional

RStudio is an Integrated Development Environment (IDE) that allows for easier use of R and access to additional features for improving functionality. Although it is not necessary for using R, we strongly encourage installation to improve your experience with this software. General features include a user console, syntax-highlighting editor that supports direct code execution, as well as tools for plotting, history, debugging, and workspace management. Like R, it is also open-source and available as a free download. An RStudio installation will recognize R if it is previously installed. As before, installation requires administration privileges. The following is a step-by-step guide to installing RStudio:

1. Visit the RStudio website using a web browser: www.rstudio.com. Click on the [Download RStudio](#) link.



2. Click on the [Desktop](#) link



3. Click on the [Download RStudio Desktop](#) link

	Open Source Edition	Commercial License
Overview	<ul style="list-style-type: none"> • Access RStudio locally • Syntax highlighting, code completion, and smart indentation • Execute R code directly from the source editor • Quickly jump to function definitions • Easily manage multiple working directories using projects • Integrated R help and documentation • Interactive debugger to diagnose and fix errors quickly • Extensive package development tools 	All of the features of open source; plus: <ul style="list-style-type: none"> • A commercial license for organizations not able to use AGPL software • Access to priority support
Support	Community forums only	<ul style="list-style-type: none"> • Priority Email Support • 8 hour response during business hours (ET)
License	AGPL v3	Commercial Desktop License
Pricing	Free	\$995/year
	DOWNLOAD RSTUDIO DESKTOP	BUY NOW

- Click the link for your operating system. A .exe file will be downloaded to the default download location for your computer.

Download RStudio Desktop v0.98.1062 — [Release Notes](#)

RStudio requires R 2.11.1 (or higher). If you don't already have R, you can download it [here](#).

Let's stay in touch. Give us your email and we'll keep you in the loop.

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[Submit](#)

Installers for ALL Platforms

Installers	Size	Date	MD5
RStudio 0.98.1062 - Windows XP/Vista/7/8	44.8 MB	2014-09-18	4b604704bd8643f392823be671b5f8e7
RStudio 0.98.1062 - Mac OS X 10.6+ (64-bit)	38.5 MB	2014-09-18	e4f9de4958e4db6567a91cb2ed023a3c
RStudio 0.98.1062 - Debian 6+/Ubuntu 10.04+ (32-bit)	54.1 MB	2014-09-18	551a9bd110e75aaba8b1639dc65ecd34
RStudio 0.98.1062 - Debian 6+/Ubuntu 10.04+ (64-bit)	56 MB	2014-09-18	fd11cbfa4c2a934e31f4102153042552
RStudio 0.98.1062 - Fedora 13+/openSUSE 11.4+ (32-bit)	54.4 MB	2014-09-18	58d08f65e79e50cc28062349c3c886c3
RStudio 0.98.1062 - Fedora 13+/openSUSE 11.4+ (64-bit)	55.9 MB	2014-09-18	c6bade20ae1b823e8945d9e9ecb103a5

- Locate the .exe file that you just downloaded and double-click to begin installation. It should be named 'RStudio-0.98.1062.exe' or something similar. This step requires administration rights.
- Follow the installation instructions.
- Once complete, you should have a working version of RStudio that you can use with R.