

Introduction to R

JO 521



What is R?

JO 521

A PROGRAMMING LANGUAGE FOR STATISTICAL COMPUTING, DATA ANALYSIS AND CREATING GRAPHICS

INCREASINGLY USED BY JOURNALISTS TO DO DATA ANALYSIS

Advantages of Analyzing Data With R



- it's free
 - it was designed for data analysis
- It has a built-in data structure – a data frame – that makes it easy to use
- it starts counting at 1, unless other languages that start at 0
 - its easy to install on a Windows or MAC
 - it is versatile and powerful: can do data analysis, clean data, do calculations, create maps, visualize data – all with a few lines of code
 - It is reproduceable – you don't have to rewrite a script each time you work with data
 - There are lots of R users willing to help and share code and problem-solving tips

Advantages of R

Why should I
learn it?



Easier to share your work with colleagues to review



Can quickly find mistakes and correct them



Can pull in data from a lot of different formats



Can clean, scrape, make web pages and graphics all in one program



More powerful than doing SQL Queries or Pivot Tables in EXCEL to summarize data quickly



Can create maps right in the program



Some Challenges With R



there is a higher learning curve than with SQL or EXCEL

A LOT of typing

Takes some time to get proficient; harder to do on deadline

Lots of different packages – also known as libraries – which can cause some confusion

Example:


§ Base R has an import function called “read.csv”

§ R Studio we use a readr function called “read.csv”

§ Both do the same thing so can be confusing



Installing R for the First Time



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R-4.0.3 for Windows (32/64 bit)

[Download R 4.0.3 for Windows](#) (85 megabytes, 32/64 bit)
[Installation and other instructions](#)
[New features in this version](#)

If you want to double-check that the package you have downloaded matches the package distributed by CRAN, you can compare the [md5sum](#) of the .exe to the [fingerprint](#) on the master server. You will need a version of md5sum for windows: both [graphical](#) and [command line versions](#) are available.

Frequently asked questions

- [Does R run under my version of Windows?](#)
- [How do I update packages in my previous version of R?](#)
- [Should I run 32-bit or 64-bit R?](#)

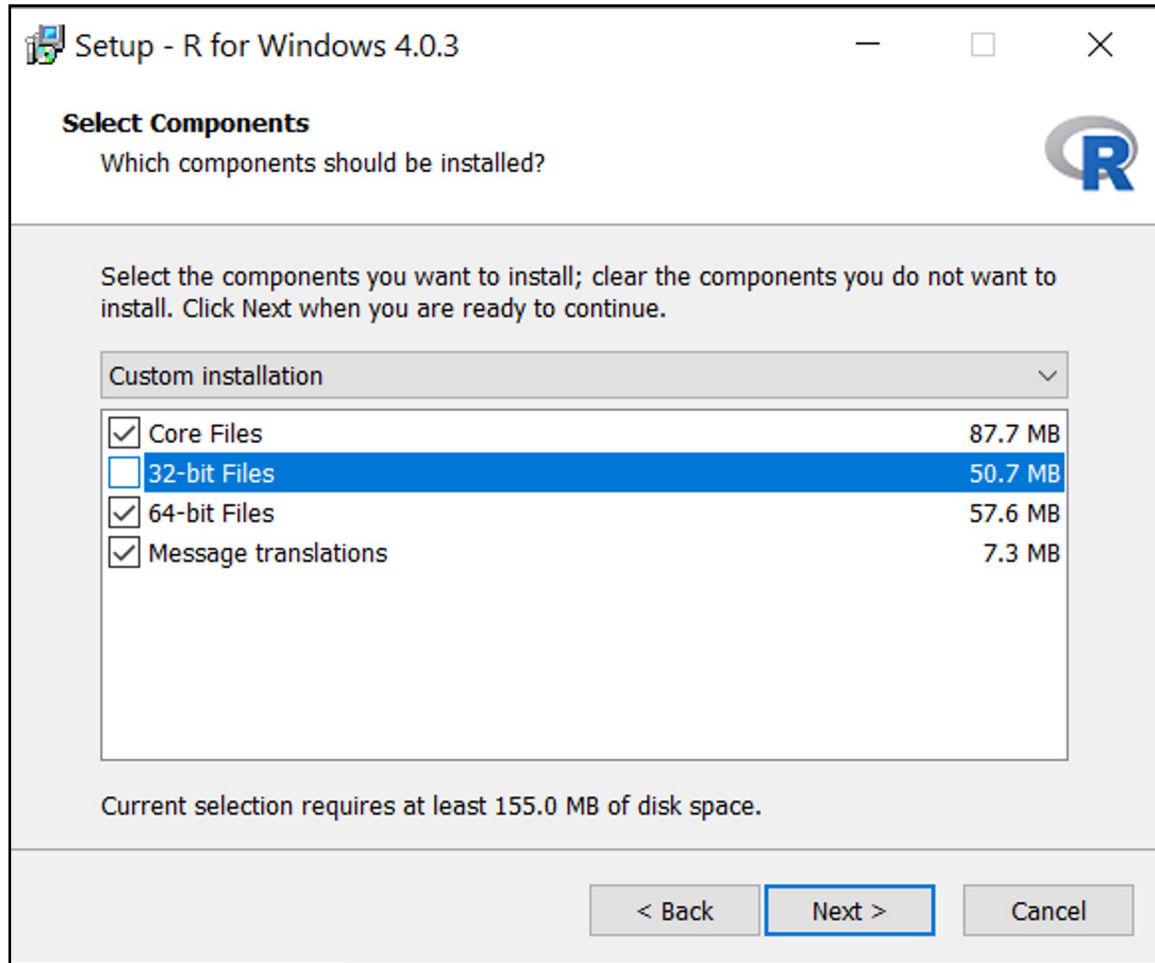
Please see the [R FAQ](#) for general information about R and the [R Windows FAQ](#) for Windows-specific information.

Other builds

- Patches to this release are incorporated in the [r-patched snapshot build](#).
- A build of the development version (which will eventually become the next major release of R) is available in the [r-devel snapshot build](#).
- [Previous releases](#)

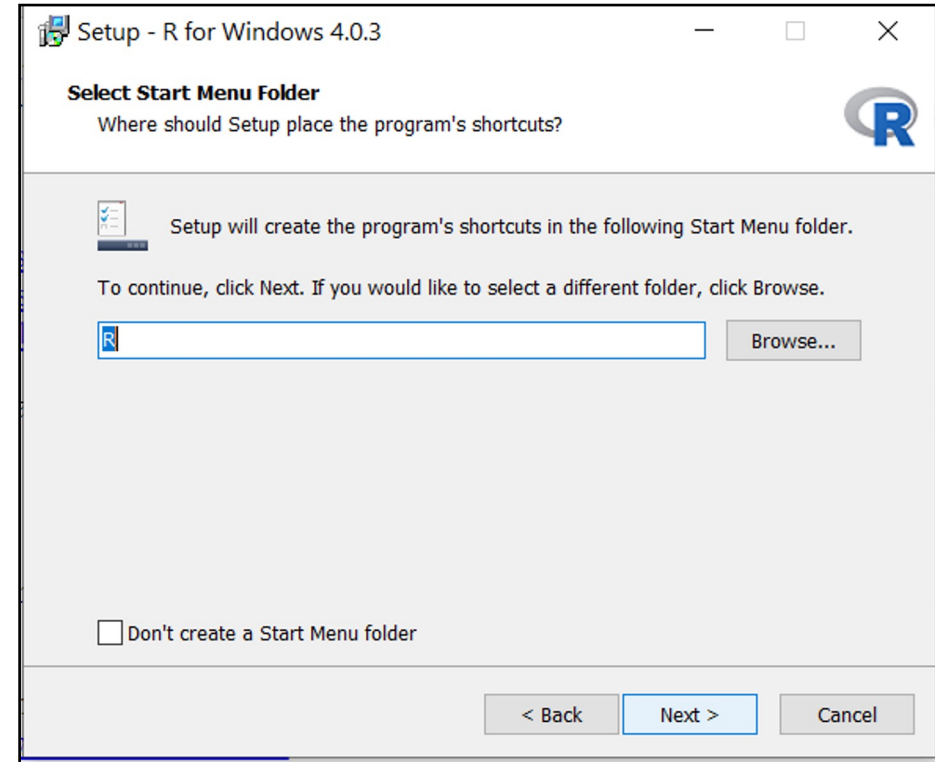
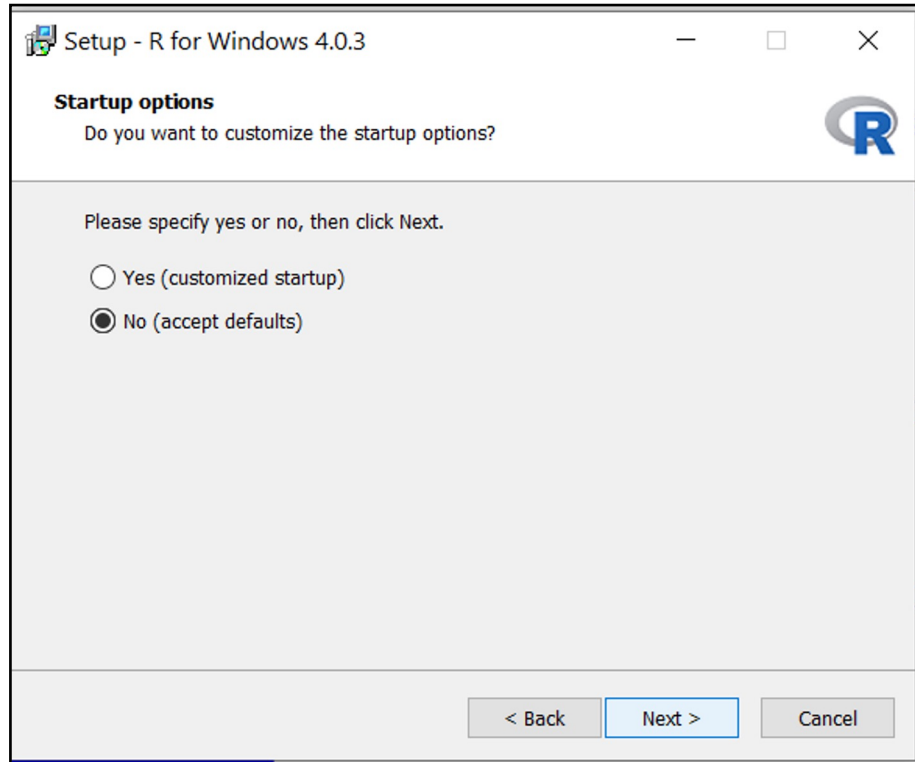
Note to webmasters: A stable link which will redirect to the current Windows binary release is <CRAN MIRROR>/bin/windows/base/release.html.

Last change: 2020-10-10



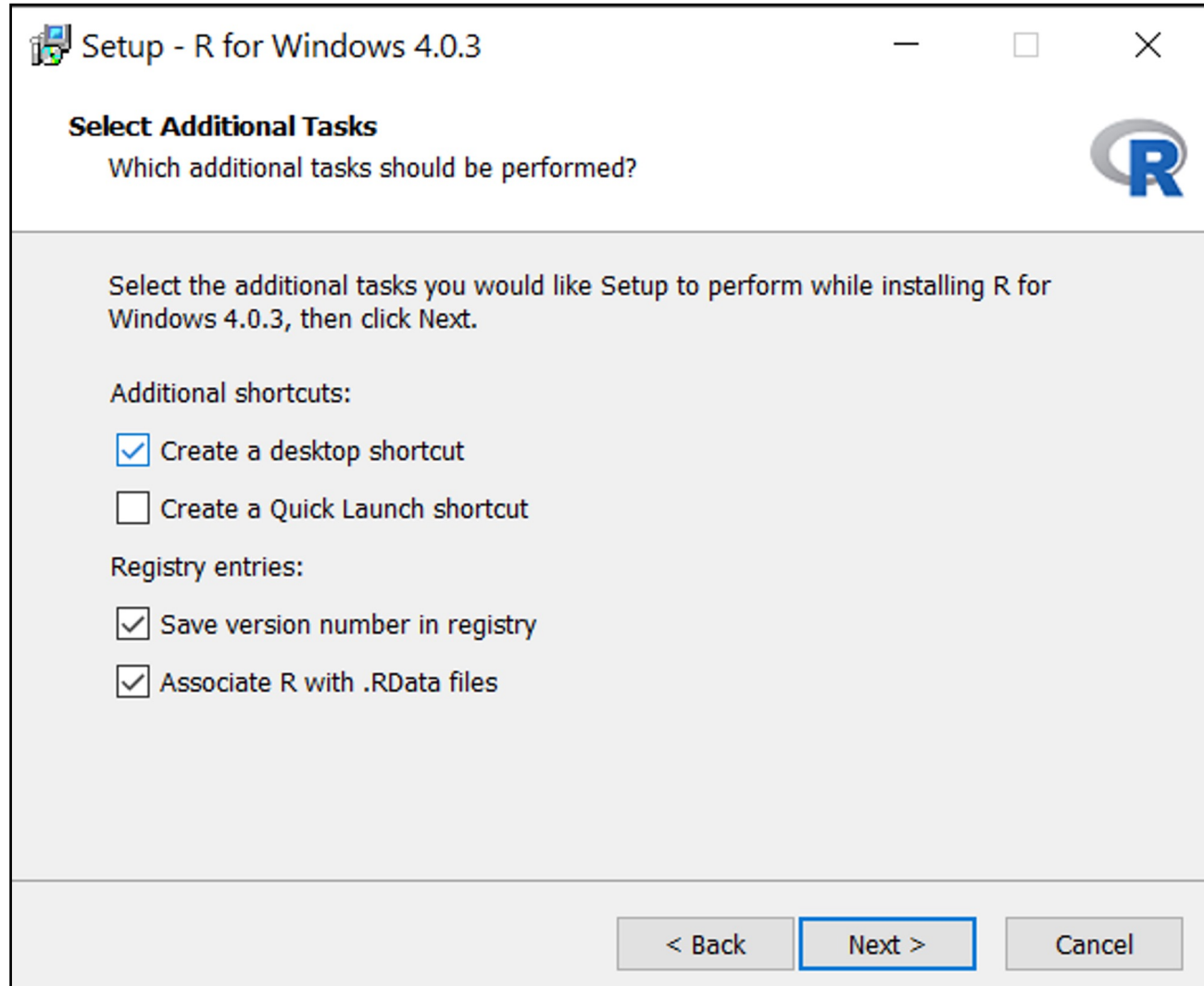
Installing R for the First Time





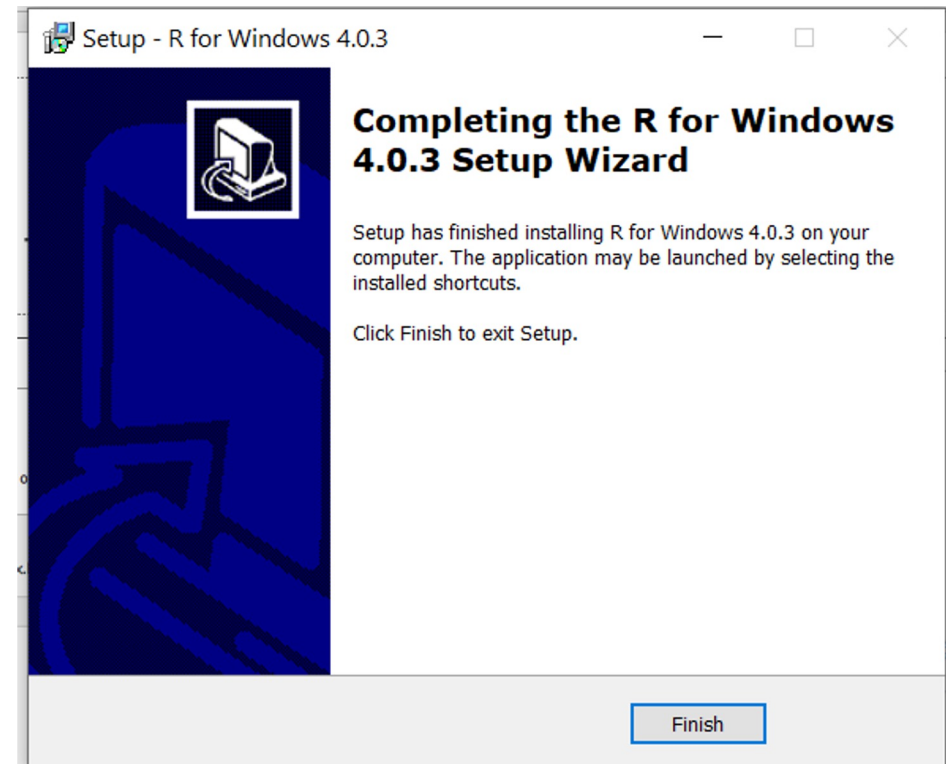
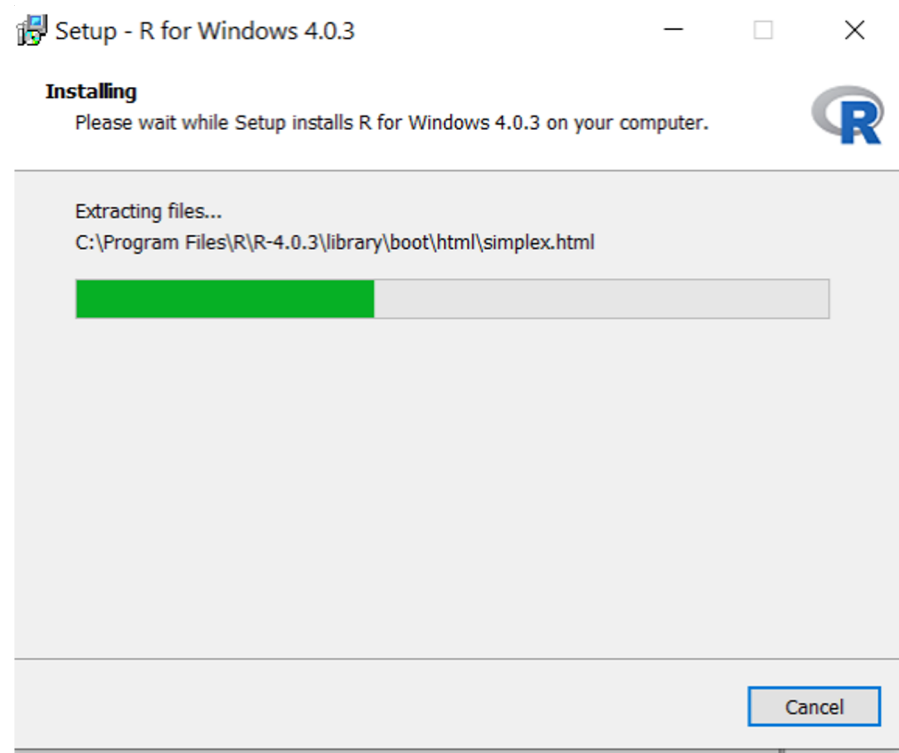
Installing Base R





Installing Base R On Your Machine





Installing R For the First Time







R Studio

WHAT IS R STUDIO?

Installing R Studio



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Download RStudio

Choose Your Version

The RStudio IDE is a set of integrated tools designed to help you be more productive with R. It includes a console, syntax-highlighting editor that supports direct code execution, and a variety of robust tools for plotting, viewing history, debugging and managing your workspace.



RStudio's new solution for every professional data science team. RStudio Team includes RStudio Server Pro, RStudio Connect and RStudio Package Manager.

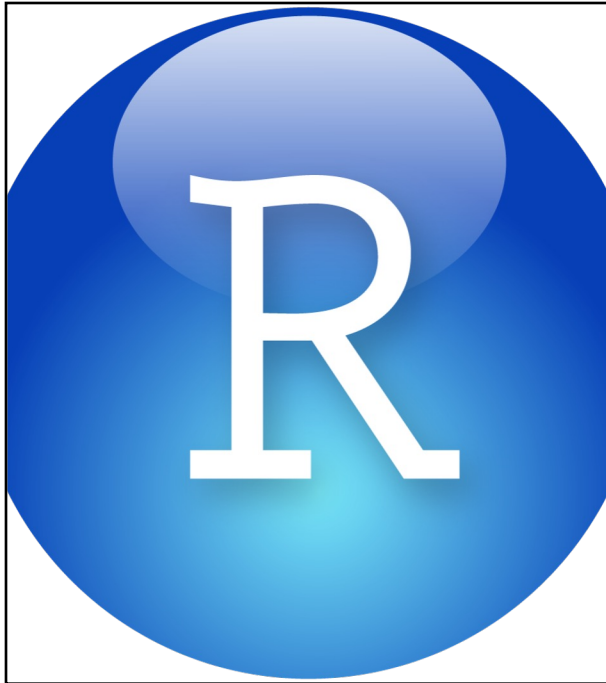
RStudio Desktop

Open Source License

Free

DOWNLOAD

Installing R Studio



RStudio Desktop 1.3.1093 - [Release Notes](#)

1. Install R. RStudio requires [R 3.0.1+](#).
2. Download RStudio Desktop. Recommended for your system:



Requires Windows 10/8/7 (64-bit)

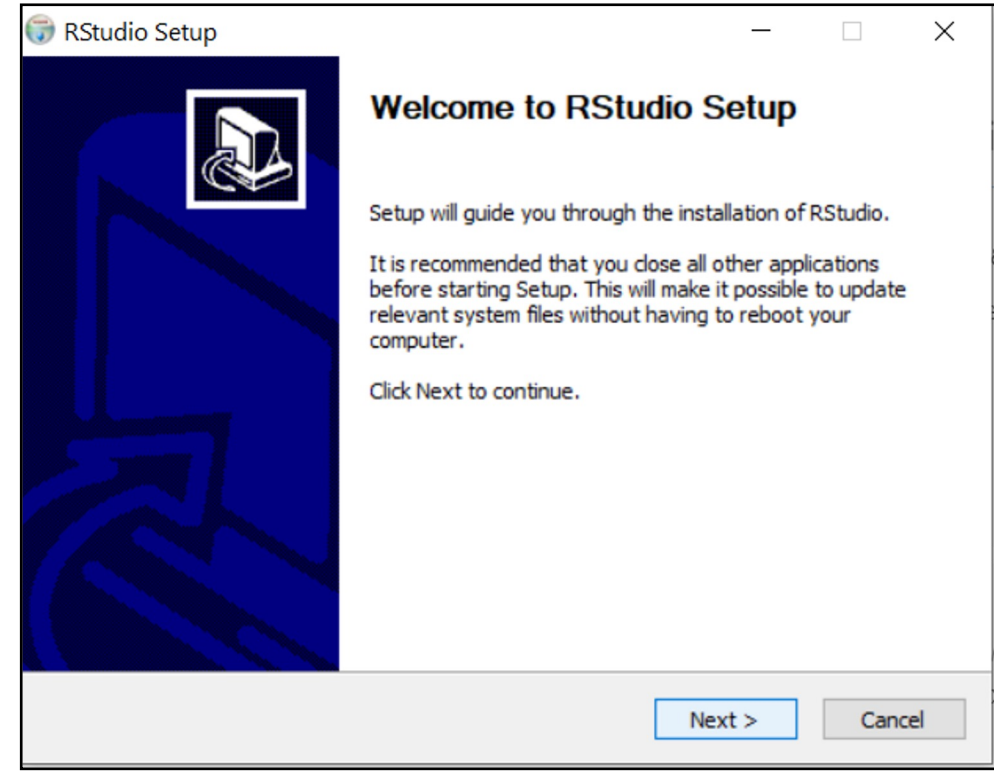
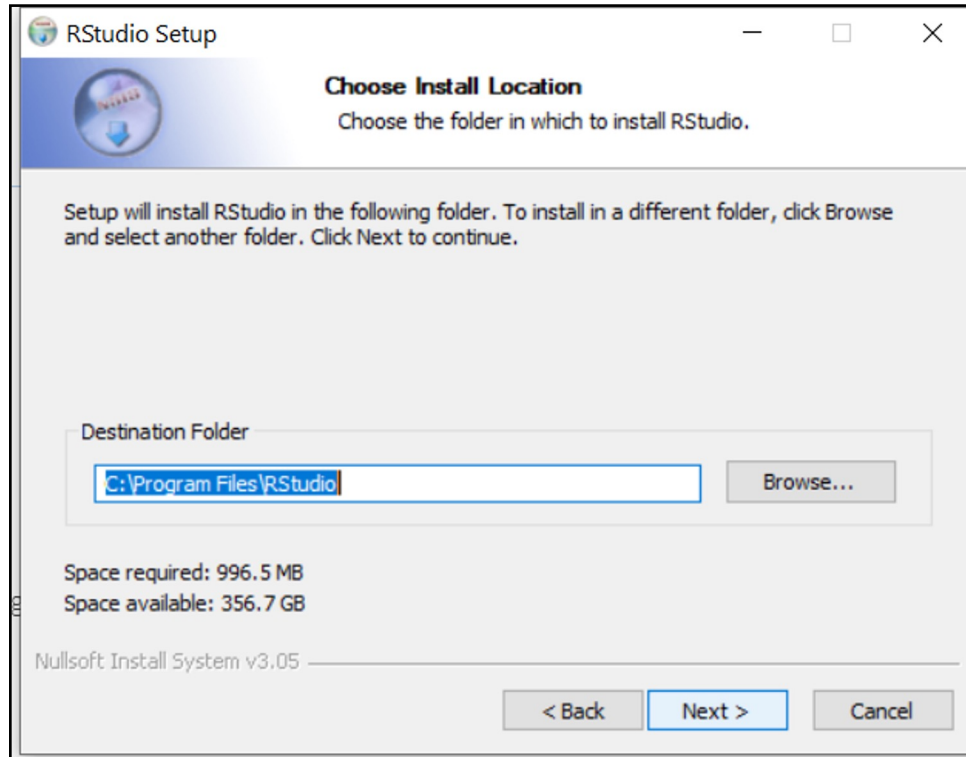


All Installers

Linux users may need to [import RStudio's public code-signing key](#) prior to installation, depending on the operating system's security policy.

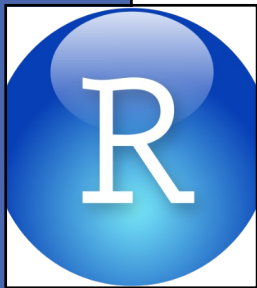
RStudio requires a 64-bit operating system. If you are on a 32 bit system, you can use an [older version of RStudio](#).

OS	Download	Size	SHA-256
Windows 10/8/7	Download RStudio-1.3.1093.exe	171.62 MB	62b9e60a

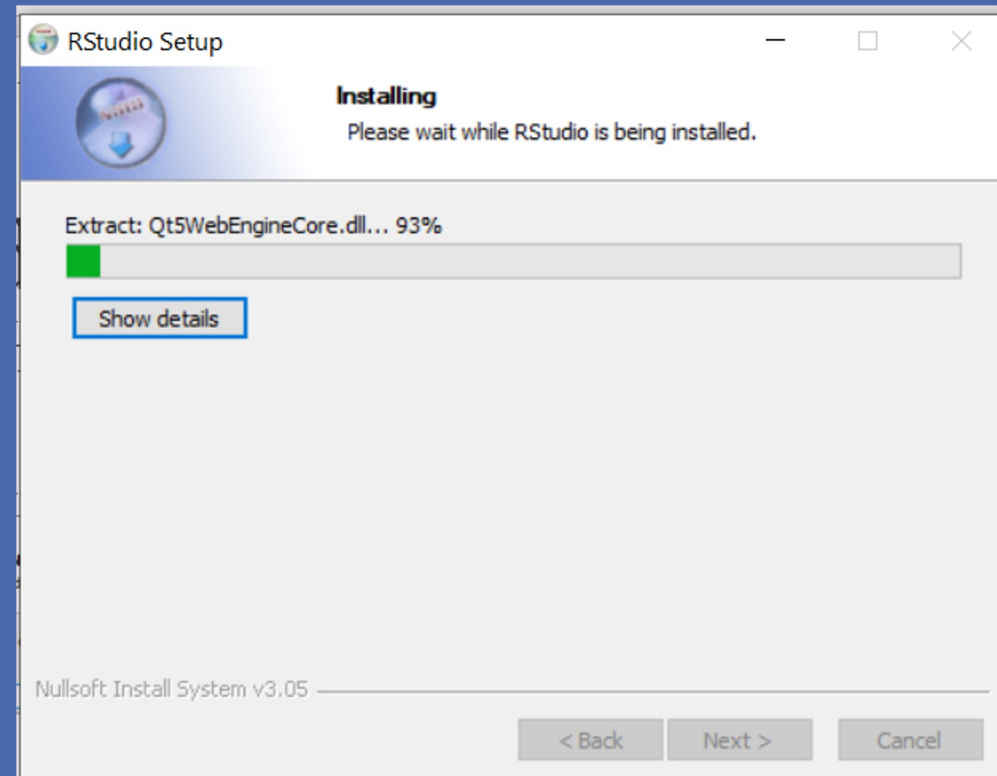
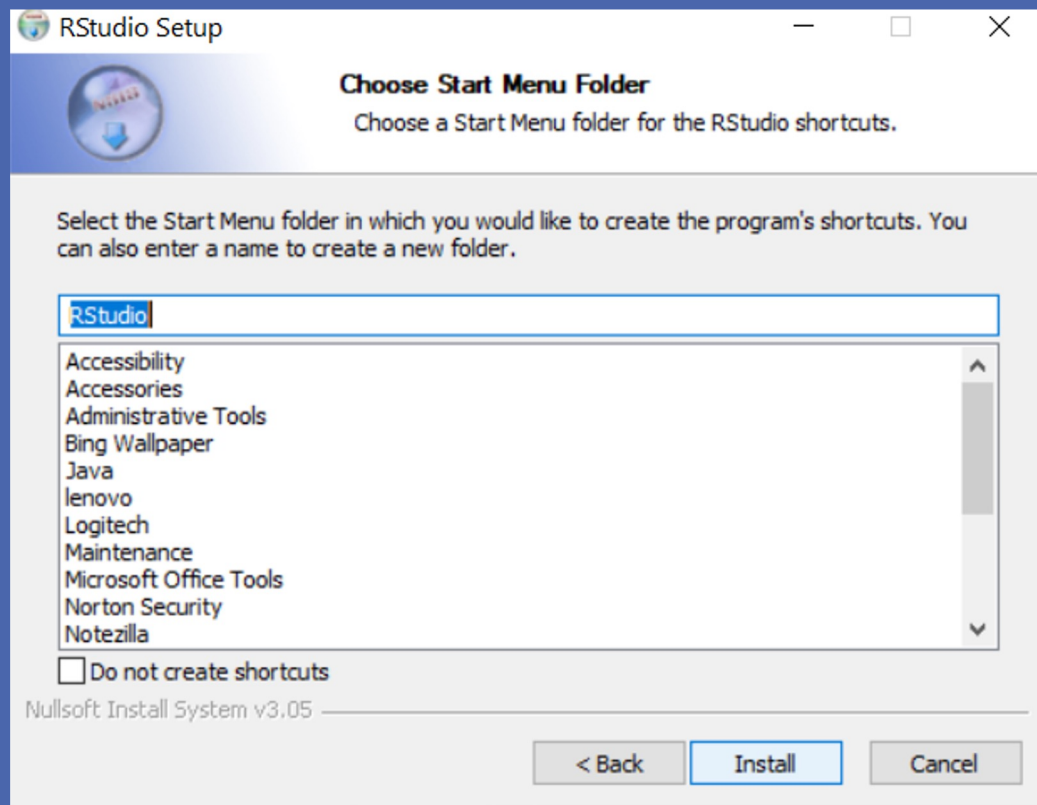


Installing R Studio





R Studio Installation



Installing R Studio

Click FINISH!

