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How to Set Up a Ruby Development Environment

Ashutosh Singh

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Web Development

Back End Web Develop...

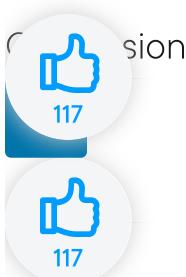
Server-side Frameworks

Ruby on Rails

Introduction

First released in the mid-1990s by Yukihiro Matsumoto, the Ruby programming language saw an exponential rise in popularity with the release of [Ruby on Rails](#), a web app framework. Platforms like Twitter, GitHub, Shopify, and others were initially built with RoR (Ruby on Rails).

In this guide, we will set up a Ruby Development Environment on Windows, Ubuntu, and macOS. We will discuss the step-



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by-step process of downloading, installing, and configuring the environment. We will also discuss RVM, a popular version manager for Ruby, which gives you more flexibility in adding and removing Ruby versions.

Installing on Windows

[RubyInstaller](#) is a widely used tool for installing Ruby on Windows. Alternatively, you can also use a package manager like [Chocolatey](#) to install [Ruby](#).

Here are the steps to install Ruby with RubyInstaller:

1. Download the recommended stable version of Ruby+Devkit from <https://rubyinstaller.org/downloads/>. It will automatically suggest the version most people are using at the time of downloading. Currently, the arrow is pointing at 2.6.6-1. The Devkit versions install the MSYS2 system, which is necessary to install RubyGems that require compilation.

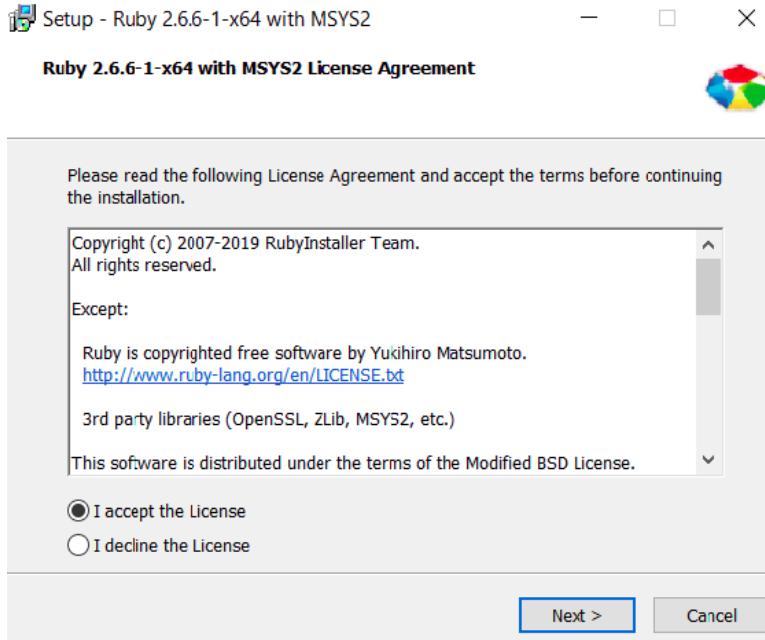
The screenshot shows the RubyInstaller website for Windows. At the top, there are links for 'About', 'Download', and 'Help'. A red banner on the right says 'For Dev or GUI'. Below that, there's a section titled 'Downloads' with two tabs: 'RubyInstallers' and 'Archives»'. Under 'WITH DEVKIT', there's a list of Ruby+Devkit versions (2.7.1, 2.7.1 (x64), 2.7.1 (x86), etc.) with an arrow pointing to 'Ruby+Devkit 2.6.6-1 (x64)'. Under 'WITHOUT DEVKIT', there's a list of Ruby versions (2.7.1, 2.7.1 (x64), 2.7.1 (x86), etc.). To the right of the download list, there are sections for 'WHICH VERSION TO DOWNLOAD?' and 'HOW TO UPDATE?'. The 'WHICH VERSION TO DOWNLOAD?' section recommends using Ruby+Devkit 2.6.x (x64) because it provides the biggest number of compatible gems and installs MSYS2-Devkit alongside Ruby, so that gems with C-extensions can be compiled immediately. The 32 bit (x86) version is recommended only if custom 32 bit native DLLs or COM objects have to be used. The 'HOW TO UPDATE?' section explains that Ruby can be updated to the latest patch version (e.g. from 2.5.1 to 2.5.4) by running the newer version. If new gems are not overwritten and will work with the new version without re-installation, it's sufficient to use the RubyInstaller without Devkit for update installations. The Devkit can be updated separately per link 'install' command.

1. Once downloaded, open the installer, check

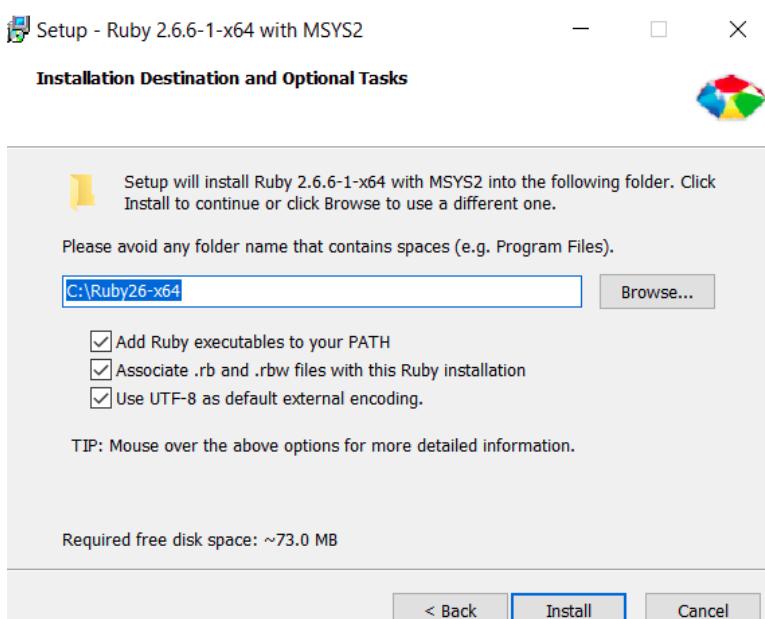


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I accept the License, and click **Next**.



2. Using RubyInstaller saves you from manually setting the **PATH** variable and other configurations that you may need. You can change the Ruby installation folder or leave it at default.

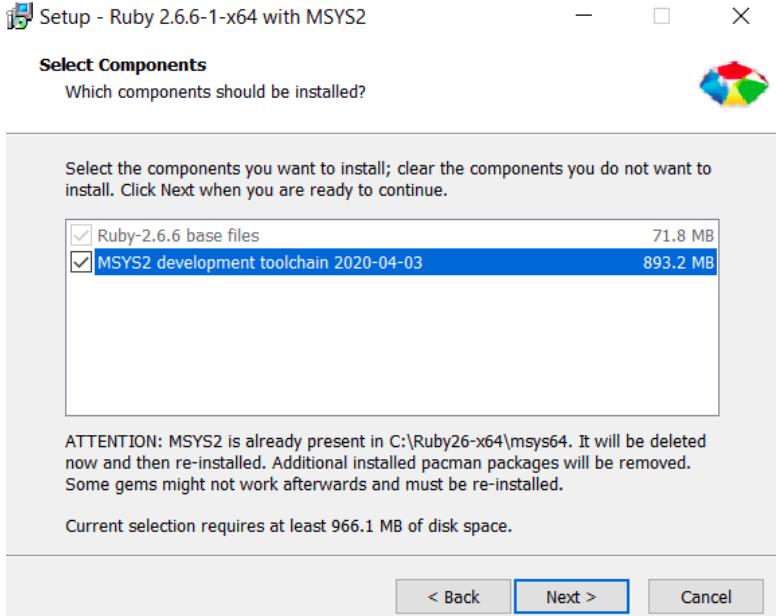


3. Make sure to check the MSYS2 development toolchain option on the next screen:


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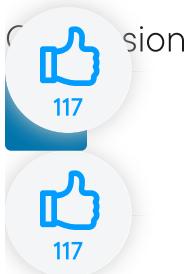


4. On the installer's final screen, another checkbox appears: **Run 'ridk install' to set up MSYS2 and development toolchain.**
Make sure to select it and click **Finish**.



Installing Development Toolchain

A terminal window will open to install the development toolchain:



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The `ridk install` command will ask for the components you want to install. Leave it at default, and hit **ENTER**. After the installation completes, you should see the message,

Install MSYS2 and MINGW

development toolchain succeeded. You will again see the same install prompt. Just hit **ENTER** and the terminal will close.

Terminal

```

1 Install MSYS2 and MINGW development toolcha
2
3   1 - MSYS2 base installation
4   2 - MSYS2 system update (optional)
5   3 - MSYS2 and MINGW development toolchain
6
7 Which components shall be installed? If uns

```

Verifying the Installation

You can verify the installation by running the following command in your terminal.

Terminal

```

1 ruby -v

```



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You should see an output like this.

Output

```
1 ruby 2.6.6p146 (2020-03-31 revision 67876)
```

Installing on Ubuntu

The most common and easiest way to install Ruby on Ubuntu is through the `apt` package manager, and you can do so with one command. It might be a good idea to update the packages index beforehand.

bash

```
1 sudo apt update  
2 sudo apt-get install ruby-full
```

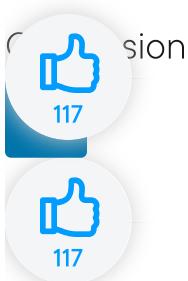
You can verify the installation by checking the version of the Ruby installed.

bash

```
1 ruby --version
```

Installing on MacOS

Ruby comes pre-installed with default macOS installation; you can check that by running the following command in the terminal.



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```
terminal  
1 ruby -v
```

It is possible that the Ruby that came pre-installed is not the most recent version, and you may run into compatibility issues when building projects.

Installing Using Homebrew

You can install Ruby using [Homebrew](#) with just one command. In your terminal, run the following command:

```
terminal  
1 brew install ruby
```

This command will install the most recent stable version of Ruby that is available.

Updating using Homebrew

To update your version of Ruby, get the latest packages by updating Homebrew, and then upgrade Ruby:

```
terminal  
1 brew update  
2 brew upgrade ruby
```

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RVM



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For most projects, the above installation methods work great. Still, there may come a time when you need to deploy a different implementation of Ruby or a conflict between gems in different projects arises. Installing different versions of Ruby using the above methods can be a real headache. To solve this problem, different version managers like [RVM](#), [chruby](#), [rbenv](#), and others were developed.

[RVM](#) (Ruby Version Manager), created by Wayne E. Seguin, is a command-line tool to install, manage, and work with multiple Ruby environments from interpreters to sets of gems. RVM supports most UNIX-like systems, and hence is widely used with Ubuntu. For Windows, you can use [WSL](#)(Windows Subsystem for Linux).

Before installing RVM, you need [GPG](#), [curl](#), and [bash](#), but RVM will most likely autodetect it and install anything required.

Installing RVM

To install RVM, run the following commands:

```
bash
1 gpg --keyserver hkp://pool.sks-keyservers.n
2 curl -SSL https://get.rvm.io | bash -s stab
```



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You need to run the following command to start using RVM:

```
bash  
1 source ~/.rvm/scripts/rvm
```

Installing Ruby with RVM

To install the latest version of Ruby:

```
bash  
1 rvm install ruby
```

Use the latest version as default.

```
bash  
1 rvm --default use ruby
```

To install a specific version of Ruby:

```
bash  
1 rvm install X.X.X
```

Where `X.X.X` is the version of Ruby.

Using Different Versions of Ruby

You can jump between different versions using the `rvm use X.X.X` command.

This example will show how to install two different versions of Ruby and switch between them. The same steps can be followed for any



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number of Ruby versions.

To install and use Ruby 2.5.1, run the following commands:

```
bash
1 rvm install 2.5.1
2 rvm use 2.5.1
3 ruby -v
```

Here is the output of the above command:

```
Output
1 ruby 2.5.1p57 (2018-03-29 revision 63029) [
```

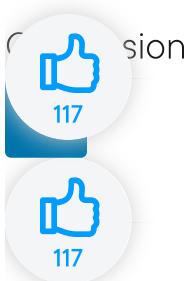
Now, install a different version of Ruby:

```
bash
1 rvm install 2.1
2 rvm use 2.1
3 ruby -v
```

This Ruby version is different from the above output.

```
Output
1 ruby 2.1.1p76 (2014-02-24 revision 45161) [
```

Both Ruby versions are installed and present in the system simultaneously, and the `rvm use X.X.X` command specifies which version to use. To see the current version of Ruby, enter the following into the terminal:



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```
bash
```

```
1 rvm list
```

Output

```
1 ruby-2.5.1 [ x86_64 ]  
2 * ruby-2.7.1 [ x86_64 ]  
3 =>ruby-2.1.1  
4  
5 # => - current  
6 # *= - current && default  
7 # * - default
```

Uninstalling a Ruby Version

To uninstall any version of Ruby you previously installed using RVM, run the following command:

```
bash
```

```
1 rvm uninstall 2.1.1
```

You can read more about this [here](#).

Conclusion

Now that your local machine is ready for Ruby software development, you can learn more about programming with Ruby and start creating awesome stuff.

Although only RVM was discussed in this guide, many version managers are available out there.



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You can explore them and find the one that corresponds with your needs. You can also further install and learn Ruby on Rails and take your development to the next level.

Here are some resources you may find useful:

- [Ruby Docs](#)
- [Getting Started with Rails](#)
- [Try Ruby in Browser](#)

Happy Coding!