

How to Install Ruby on Rails on Ubuntu 22.04

Status: **VERIFIED**

My System configuration: Ubuntu 22.04 Desktop, fully updated,
as a virtual machine hosted on VMWare Workstation 12

Intro

Ruby and Rails commonly known as "Rails" is an open-source web application framework. This framework is written in Ruby programming language which helps you to create highly powerful websites and applications.

Rails is a server-side web application framework that follows the MVC concept.

In this guide, we learn how to install the Ruby and Rails framework on Ubuntu 22.04.

Prerequisites

Ubuntu server 22.04 (you can also use a desktop version if you like....no problemo!)

A non-root user with sudo privileges

Internet connection to download packages

NOTES BEFORE YOU BEGIN:

- a) Always (and i mean ALWAYS!) backup your files!
 - b) beware of the syntax! Linux is case sensitive, so write everything you see in this guide, exactly as you see it!
 - c) except of course the usernames,passwords and so.....
 - d) beware of the multiple-line commands!
 - e) we take NO responsibility for any damages this guide may cause!
- It was tested in my system,but it may crash yours!

Install Ruby on Ubuntu

There are many ways to install Ruby on Ubuntu 22.04.

In this article, we are going to use Rbenv.

You will need another tool ruby-build to install Ruby.

Use the following command to update your Ubuntu 22.04.

```
sudo apt update
```

Use the following command to install Ruby dependency packages.

```
sudo apt install git curl libssl-dev libreadline-dev zlib1g-dev autoconf bison build-essential libyaml-dev libreadline-dev libncurses5-dev libffi-dev libgdbm-dev
```

After the complete installation of dependency packages, run the following command to clone both Rbenv and Ruby-build repositories at GitHub.

```
curl -sL curl -fsSL https://github.com/rbenv/rbenv-installer/raw/HEAD/bin/rbenv-installer | bash
```

To set path in `.bashrc`, run the following commands, one by one:

```
echo 'export PATH="$HOME/.rbenv/bin:$PATH"' >> ~/.bashrc
```

```
echo 'eval "$(rbenv init -)"' >> ~/.bashrc
```

```
exec $SHELL
```

Now you can install any available version of Ruby using Rbenv.

To list available Ruby version, run the following command:

```
rbenv install -l
```

You can install any version of Ruby using Rbenv. In this example, I am going to install Ruby 3.1.2. To choose any version compatible with your system, replace version number.

Use the following command:

```
rbenv install 3.1.2
```

After completing the installation, run the following command to set global variable:

```
rbenv global 3.1.2
```

To verify installation, run the following command (OPTIONAL):

```
ruby -v
```

You will get output similar as:

```
ruby 3.1.2p20 (2022-04-12 revision 4491bb740a) [x86_64-linux]
```

Run the following command to install bundler.

```
gem install bundler
```

Install Node.js on Ubuntu

Rails require Javascript runtime to build applications so you need to install the latest version of Node.js.

You can install Node.js from NodeSource or Ubuntu's official repository.

Run the following command to install NodeJS from NodeSource.

At the time of writing, NodeSource repository provide v18.x with the latest stable version.

```
curl -sL https://deb.nodesource.com/setup_18.x | sudo -E bash -
```

Execute the following command to install Nodejs.

```
sudo apt install nodejs
```

To check Node.js version, run the following command: (OPTIONAL)

```
node -v
```

You will get the output as:
v18.7.0

After installing Node.js, you need to install yarn package manager.
Run the following command to add gpg key for yarn package manager.
`curl -sL https://dl.yarnpkg.com/debian/pubkey.gpg | sudo apt-key add -`

Add repository for yarn package using the following command:
`echo "deb https://dl.yarnpkg.com/debian/ stable main" | sudo tee /etc/apt/sources.list.d/yarn.list`

Finally, run the following command to install yarn package manager.
`sudo apt update && sudo apt install yarn`

Install Rails on Ubuntu

Rails can be installed using the gem install command.
Execute the following command to install Rails on ubuntu 22.04.
`gem install rails`

You can use `gem install rails --version=<version>` command to install specific version of Rails.
Use the following command to verify Rails installation on your system.
`rails -v`

Output:
Rails 7.0.7.2

(As of writing this article the latest version of rails is 7.0.7.2)

Install PostgreSQL

In this article, we are going to use PostgreSQL to run the Rails application.
In Ubuntu, PostgreSQL is available in the default repository.

Run the following command to install Postgres and dependencies:
`sudo apt install postgresql postgresql-contrib libpq-dev -y`

Once the installation is completed, start and enable postgres service to start automatically, after reboot.

```
sudo systemctl start postgresql
```

```
sudo systemctl enable postgresql
```

Postgres service has been started and enabled.
Now login to the PostgreSQL shell and create a new role with a password and the privileges createdb and login.

In this example, I am going to use 'errikos' as a role.

Use the following command:

```
sudo -i -u postgres psql
```

To create role and grant permission run the following command:

```
create role errikos with createdb login password 'mypassword';
```

To list all available users on PostgreSQL, run the following command:

```
\du
```

You will get the role named 'errikos' on the PostgreSQL list users.

After this, hit **\q** to quit postgerql

Start a New Ruby on Rails Project with PostgreSQL

Ruby on Rails uses SQLite as the default database.

In this article, we are going to start new Rails project using PostgreSQL database.

In this guide, I am going to create a new application 'alphaproject' with the default database PostgreSQL using the following 'rails' command.

```
rails new alphaproject -d postgresql
```

You will get output similar as:

Creating new project using Ruby on Rails

Now you will get the project directory 'alphaproject', go to the project directory, and modify the database configuration file 'config/database.yml' using any text editor.

```
cd alphaproject/
```

```
nano config/database.yml
```

Go to the development section and use your database details.

In this example, I have used default credentials created in above steps.

You can have your own assumption.

NOTE: when you edit config/database.yml REMEMBER!!

1. use this kind of format in all parts (one line at a time) :

```
host: localhost
```

```
port: 5432
```

```
username: errikos
```

```
password: mypassword
```

2. use spaces to intend!!! no tabs allowed in yaml files!

Now, go to the testing section, and modify PostgreSQL database configuration as below:

```
host: localhost
port: 5432
username: errikos
password: mypassword
```

Save the file and exit.

Now, run these rails commands one by one to generate and migrate database for our new Rails project.

```
rails db:setup
```

```
rails db:migrate
```

Now it's time to host the application.

Start the default rails web server using the following command:

```
rails s -b 0.0.0.0 -p 8080
```

Your rails application will listen to the port '8080' for an incoming connection. The alphaproject project will run with the port '8080'.

Now open your browser and type your server IP address with port '8080' on the address bar.

```
http://your-server-ip:8080
```

You will get the default web page of Ruby on Rails....

to verify, hit control + c to stop the server, refresh your browser and check if it goes offline....

Conclusion

In this guide, you have learned how to install Ruby using Rbenv, with an application compatible version on Ubuntu 22.04.

You got knowledge about PostgreSQL database installation and configuration. Finally, you got an idea on creating Rails project and hosting an application using PostgreSQL.

Credits

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This tutorial was based on:

<https://linuxopsys.com/topics/install-ruby-on-rails-on-ubuntu#comment-1268>

So, we have to thank Bobbin too, for his work!

Edits, extra comments and tips, the verification of this guide, and of course the final pdf, by Errikos "Root" Ntinis
August 26, 2023

P.S.

You may re-distribute this guide, for non-profit use,
but if you please, mention us (Errikos and Bobbin) for doing our part!