

Guide for Setting Up Git and GitHub with RStudio

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This guide provides a step-by-step process to set up R, RStudio, Git, and GitHub with RStudio. It includes instructions for installing R, RStudio, and Git, configuring Git with RStudio, creating a personal access token for GitHub, and verifying the setup.

1 Sign up at GitHub.com

If you do not have a GitHub account, sign up here: <https://github.com/join>

2 Install R

If you do not have R installed, please do so using the appropriate link for your operating system:

- Windows: <https://cran.r-project.org/bin/windows/base/>
- Mac: <https://cran.r-project.org/bin/macosx/>
- Linux: <https://cran.r-project.org/bin/linux/>

3 Install RStudio

If you do not have RStudio installed, please download it from the following link: <https://www.rstudio.com/products/rstudio/download/>

4 Install Git

You can download git from the following links:

- Windows: <https://git-scm.com/download/win>
- Mac: <https://git-scm.com/download/mac>
- Linux: <https://git-scm.com/download/linux> or use the command: `$ sudo apt-get install git-all`

5 Configure Github with RStudio

First, set your user name and email to identify yourself in GitHub. For this task open RStudio, and in a new script (File > New file > R script) introduce the following lines:

```
install.packages("usethis") # Latest version
library(usethis)
usethis::use_git_config(user.name = "YourName", user.email = "your@mail.com")
```

Next, create a personal access token for authentication. This token is necessary for allowing RStudio to communicate securely with GitHub.

```
usethis::create_github_token()
# In case your usethis version is < 2.0.0, use:
# usethis::browse_github_token()
```

Once the token is created, save it in a file such as token-git.txt for future reference.

Note for Linux users

If you are using Linux, the `set_github_pat()` function might store your PAT in a memory cache that expires after 15 minutes or when the computer is rebooted. To extend the cache timeout to match the PAT validity period, use the following configuration:

```
system("git config --global credential.helper 'cache --timeout=2600000'")
# Cache timeout ~30 days
```

Setting the personal access token

You can set the personal access token using:

```
credentials::set_github_pat("YourPAT")
```

Alternatively, you can store it manually in your `.Renviron` file:

```
usethis::edit_r_environ()
# Add the following line to the file that opens:
# GITHUB_PAT=xxxxyyyzzz
# Ensure the .Renviron file ends with a newline
```

6 Verify Settings

To verify your settings, run:

```
usethis::git_sitrep()
# Your username and email should be stated correctly in the output.
```

7 That's It!

You have now set up Git and GitHub with RStudio. Now you can proceed as follows: File > New Project > Version Control. Then, you will need to enter the GitHub repository of interest from your GitHub profile, e.g., test-repo. Once done, you will be able to access all files within a local copy, modify them, commit, pull, and push using the RStudio GUI!