



# Introduction to Travis CI with git and GitHub

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[www.github.com/richelbilderbeek/CppPresentations](http://www.github.com/richelbilderbeek/CppPresentations)



# What?

- What: Travis CI is a continuous integration service
- What: Because tests should be automated
- Expert use: Configure Travis CI to test as much as possible

Test Your Software, or Your Users Will  
Andre Hunt, 'The Pragmatic Programmer'

# Overview

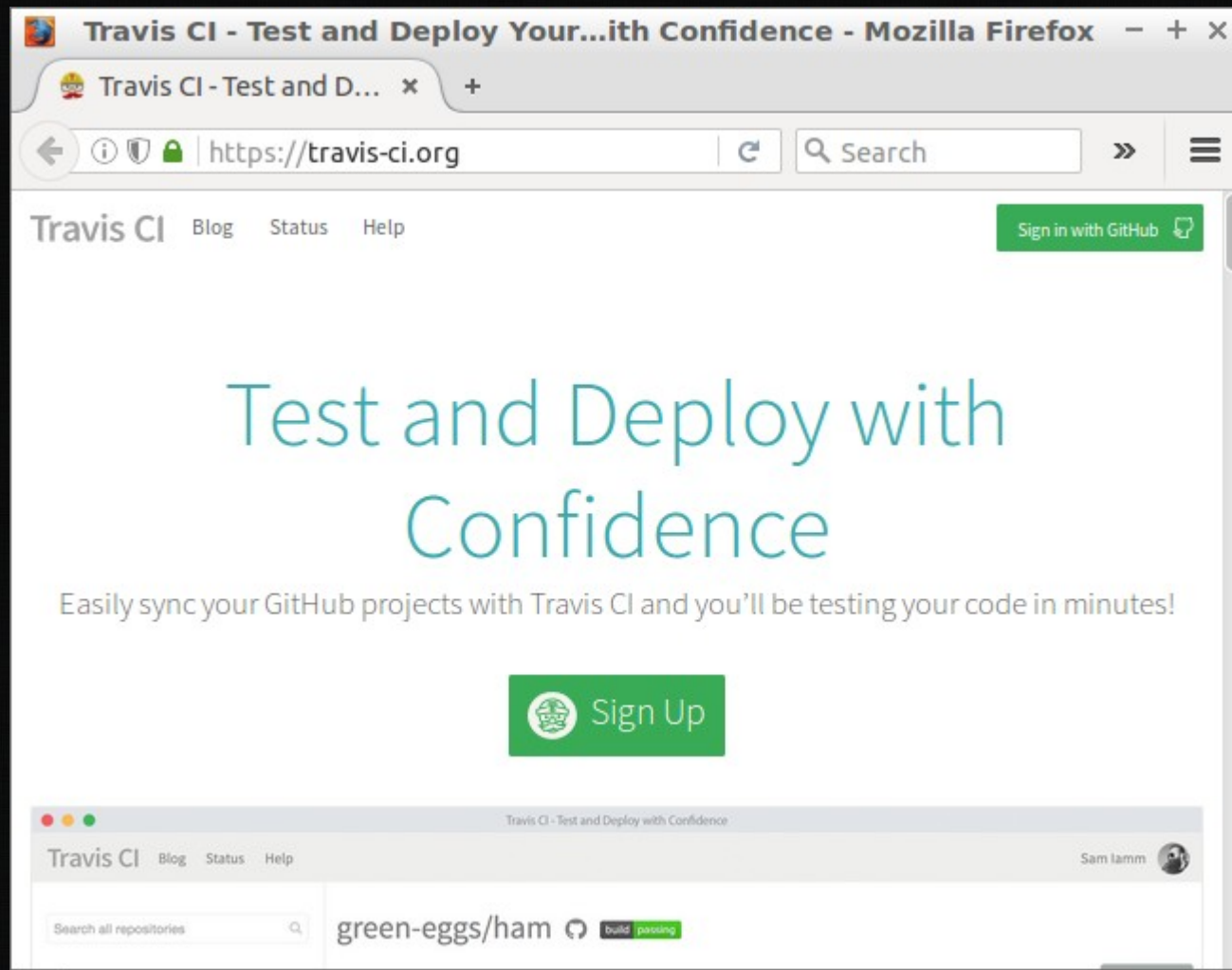
- Activate Travis
- Configure Travis file
- Push to GitHub





# Activate Travis

- Go to <https://travis-ci.org>



# Activate accounts

Richel Bilderbeek - Profile - Travis CI - Mozilla Firefox

Richel Bilderbeek - P... x +

https://travis-ci.org/profile/richelbi Search

Travis CI Blog Status Help Richel Bilderbeek

**Richel Bilderbeek**  
Repositories 453  
Token:

[Sync account](#)

We're only showing your public repositories. You can find your private projects on [travis-ci.com](#).

**Organizations**

- Hive5**  
Repositories 4
- BEAST2-Dev**  
Repositories 16
- DIYbio Groningen**  
Repositories 11
- LucKey Productions**  
Repositories 12

Is an organization missing?  
[Review and add your authorized organizations.](#)

**1** **tra**  
Click the repository switch on

**2** **tra**  
Add .travis.yml file to your repository

**3** **tra**  
Trigger your first build with a git push

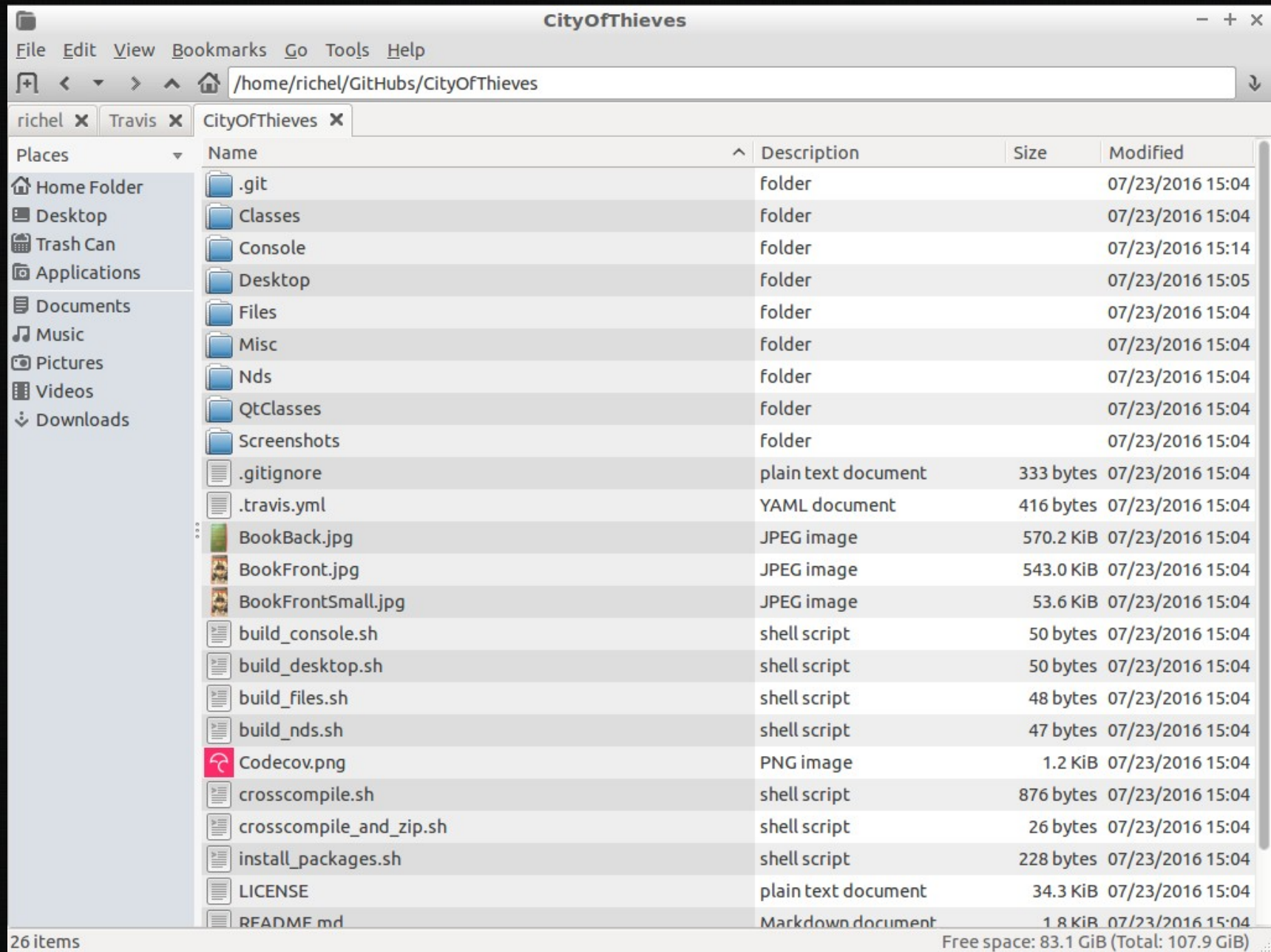
☒ richelbilderbeek/AminoAcidFighter

☐ richelbilderbeek/Android

☐ richelbilderbeek/Apfloat

☐ richelbilderbeek/ApplicationVerifierExamples

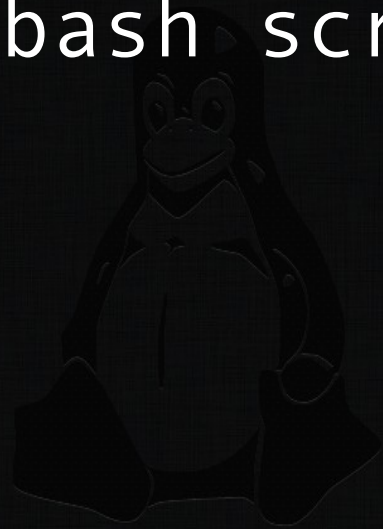
# Configure Travis files





# .travis.yml

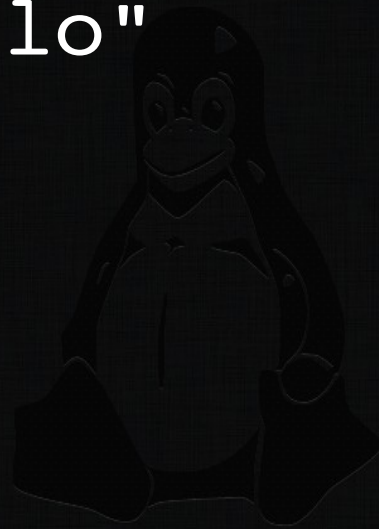
- 'Yet another Markup Language'
- Just use the bash scripts you would use



# Example .travis.yml

```
script:
```

- echo "Hello"
- ls





# Result

Build #8 - richelbilderbeek/travis\_test - Travis CI - Mozilla Firefox

richelbilderbeek/... x richelbilderbeek/... x richelbilderbeek/... x richelbilderbeek/... x Build #8 - richelbi...

https://travis-ci.org/richelbilderbeek/travis\_test/builds/ Search

✓ richelbilderbeek/travis\_test #8

⌚ Duration: 25 sec

📅 Finished: less than a minute ago

✓ richelbilderbeek/Cer2016 #674

⌚ Duration: 33 min 55 sec

📅 Finished: about 2 hours ago

✓ richelbilderbeek/nLTT #44

⌚ Duration: 3 min 31 sec

📅 Finished: 3 days ago

✓ richelbilderbeek/Brainweaver #106

⌚ Duration: 39 min 8 sec

📅 Finished: 5 days ago

✓ richelbilderbeek/RibiClasses #137

⌚ Duration: 21 min 43 sec

📅 Finished: 5 days ago

✓ richelbilderbeek/BoostGraph #105

⌚ Duration: 42 min 52 sec

📅 Finished: 5 days ago

✓ richelbilderbeek/TestRounder #9

⌚ Duration: 4 min 48 sec

📅 Finished: 8 days ago

✓ richelbilderbeek/TestConcept #34

⌚ Duration: 32 min 26 sec

📅 Finished: 11 days ago

✓ master echo and ls

📄 Commit 4921cac

📄 Compare 77ae799..4921cac

👤 richelbilderbeek authored and committed

→ #8 passed

⌚ Elapsed time 25 sec

📅 less than a minute ago

Remove log

Raw log

```
1 Using worker: worker-linux-docker-43cbc5c5.prod.travis-ci.org:travis-linux-1
2
3 Build system information
70
71 $ export DEBIAN_FRONTEND=noninteractive
72 $ git clone --depth=50 --branch=master https://github.com/richelbilderbeek/travis_test.git richelbilderbeek/travis_test
120
121 This job is running on container-based infrastructure, which does not allow use of 'sudo', setuid and setgid executables.
122 If you require sudo, add 'sudo: required' to your .travis.yml
123 See https://docs.travis-ci.com/user/workers/container-based-infrastructure/ for details.
124 $ rvm use default
127 $ ruby --version
128 ruby 1.9.3p551 (2014-11-13 revision 48487) [x86_64-linux]
129 $ rvm --version
130 rvm 1.26.10 (latest-minor) by Wayne E. Seguin <wayneesequin@gmail.com>, Michal Papis <mpapis@gmail.com> [https://rvm.io/]
131 $ bundle --version
132 Bundler version 1.7.6
133 $ gem --version
134 2.4.5
135 $ echo "Hello"
136 Hello
137
138
139 The command "echo "Hello"" exited with 0.
140 $ ls
141 LICENSE README.md
142
143 The command "ls" exited with 0.
144
145
146 Done. Your build exited with 0.
```

Top


travis\_test

^ v

Highlight All Match Case 1 of 1 match

x

# Badge

richelbilderbeek / travis\_test  build passing

Current Branches Build History Pull Requests > Build #8

✓ master echo and ls

Commit 4921cac

Compare

richelbilderbeek

✎ #8 passed

Elapsed time 25 sec

30 minutes ago

Status Image

BRANCH

MARKDOWN

```
[[Build Status]](https://travis-ci.org/richelbilderbeek/travis_test.svg?branch=master)
(https://travis-ci.org/richelbilderbeek/travis_test)
```

```
1 Using work
2
3 Build sys
70
71 $ export
110 $ git clo
120
121 This job
122 If you rea
123 See https://docs.travis-ci.com/user/workers/container-based-infrastructure/ for details.
```

 README.md

## travis\_test

build passing

Testing repository for demonstrating Travis CI

# How to get a more complex .travis.yml file

- Go to  
[https://github.com/richelbilderbeek/travis\\_cpp\\_tutorial](https://github.com/richelbilderbeek/travis_cpp_tutorial)
- Copy the best fitting Travis configuration file



# SFML example

- C++
- Simple and Fast Media Library
- Test if the code build successfully



# Example .travis.yml

```
language: cpp

compiler: gcc

sudo: true

before_install:

  - sudo apt-add-repository ppa:sonkun/sfml-development --yes

  - sudo apt-get update -qq


install:

  - sudo apt-get install libsFML-dev

script:

  - qmake

  - make
```



# R example

- Building a package
- Running a lot of tests





# Example .travis.yml

```
language: r
```

```
cache: packages
```

```
after_success:
```

- Rscript -e 'lintr::lint\_package()'
- Rscript -e 'covr::codecov()'
- Rscript -e 'goodpractice::gp()'

# Conclusion

- Travis CI can be used to
  - Reproduce a build process
  - Improve code quality
  - Education

