Introduction to Travis CI with git and GitHub

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www.github.com/richelbilderbeek/CppPresentations

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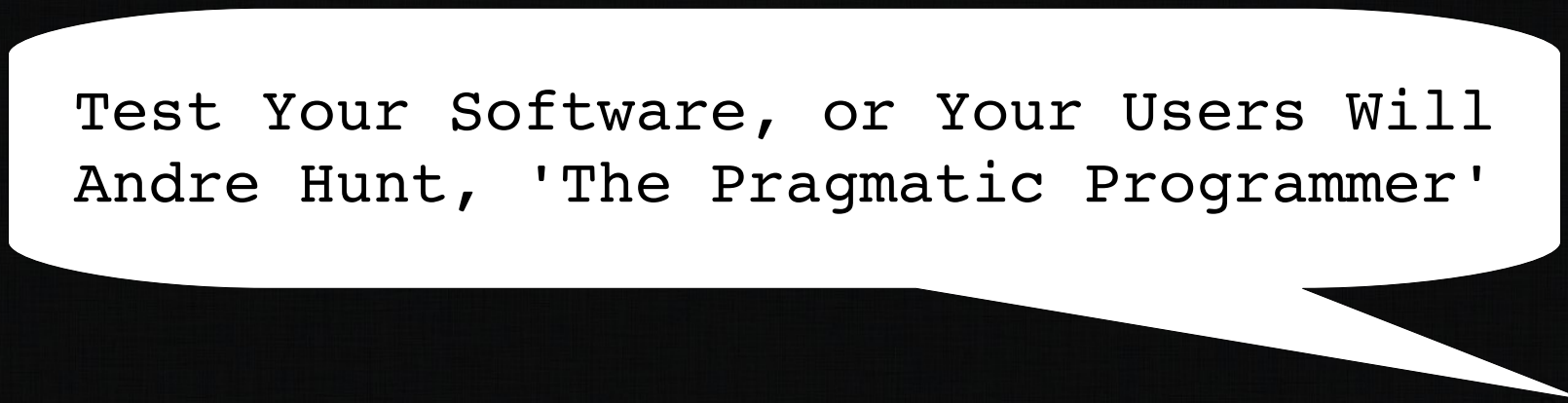
What?

- 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



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Overview

- Activate Travis
- Configure Travis file
- Push to GitHub

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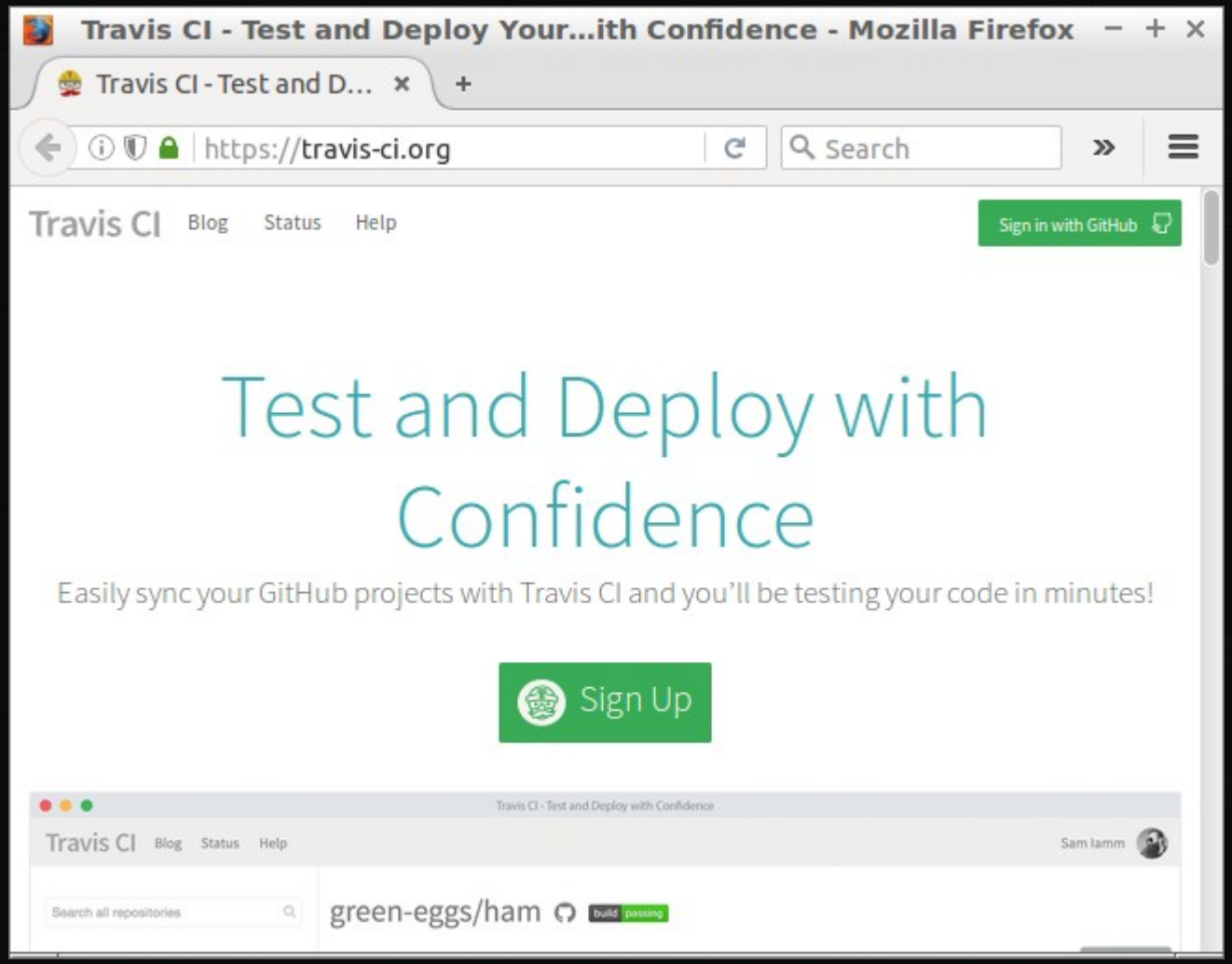
Activate Travis

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



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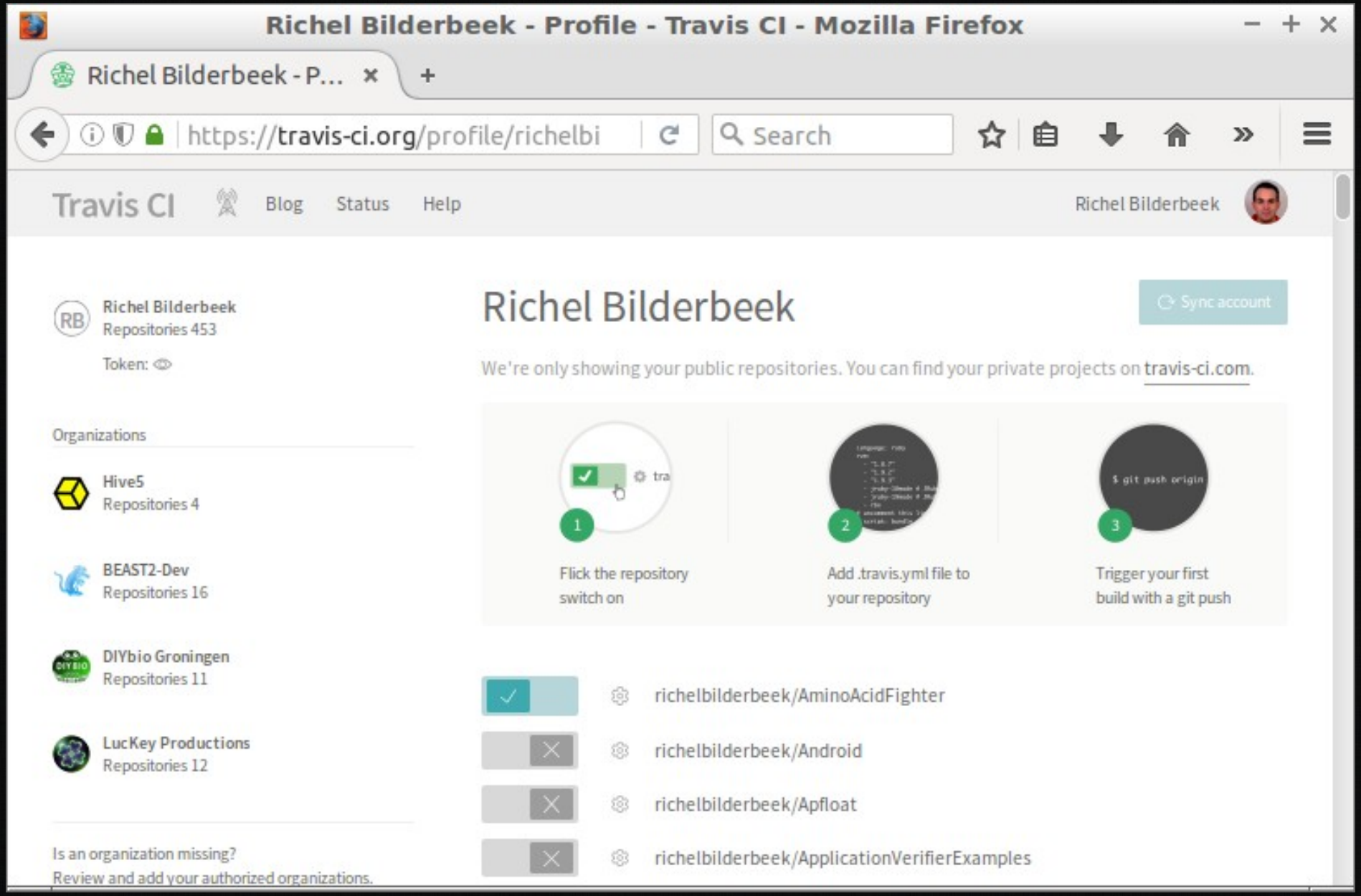
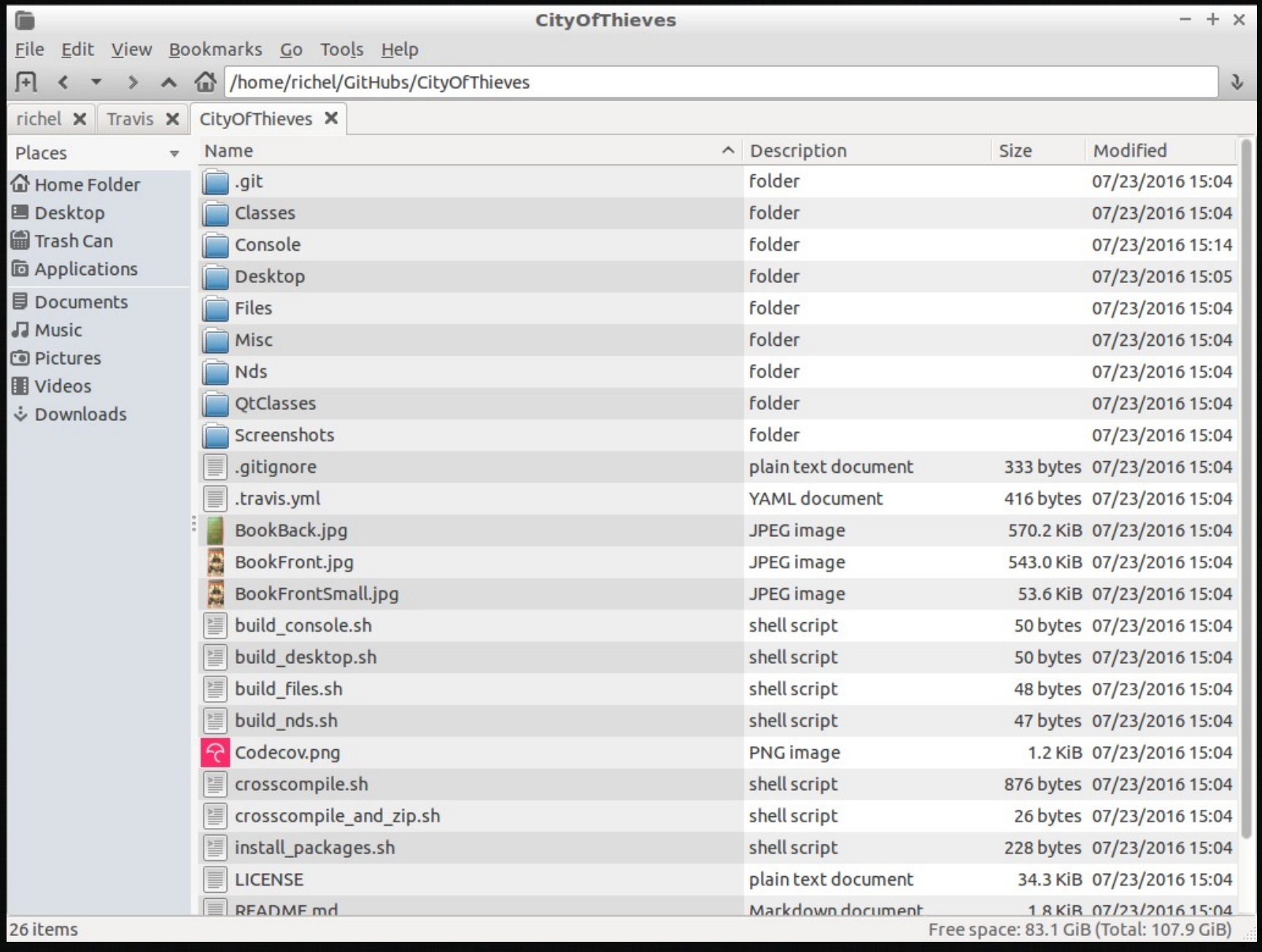
Activate accounts



Configure Travis files



.travis.yml

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

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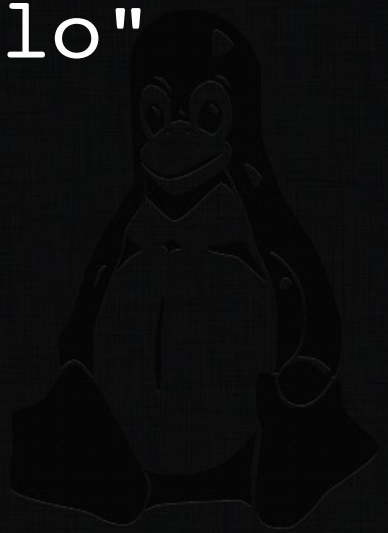
Example .travis.yml

```
script:
  - echo "Hello"
  - ls
```



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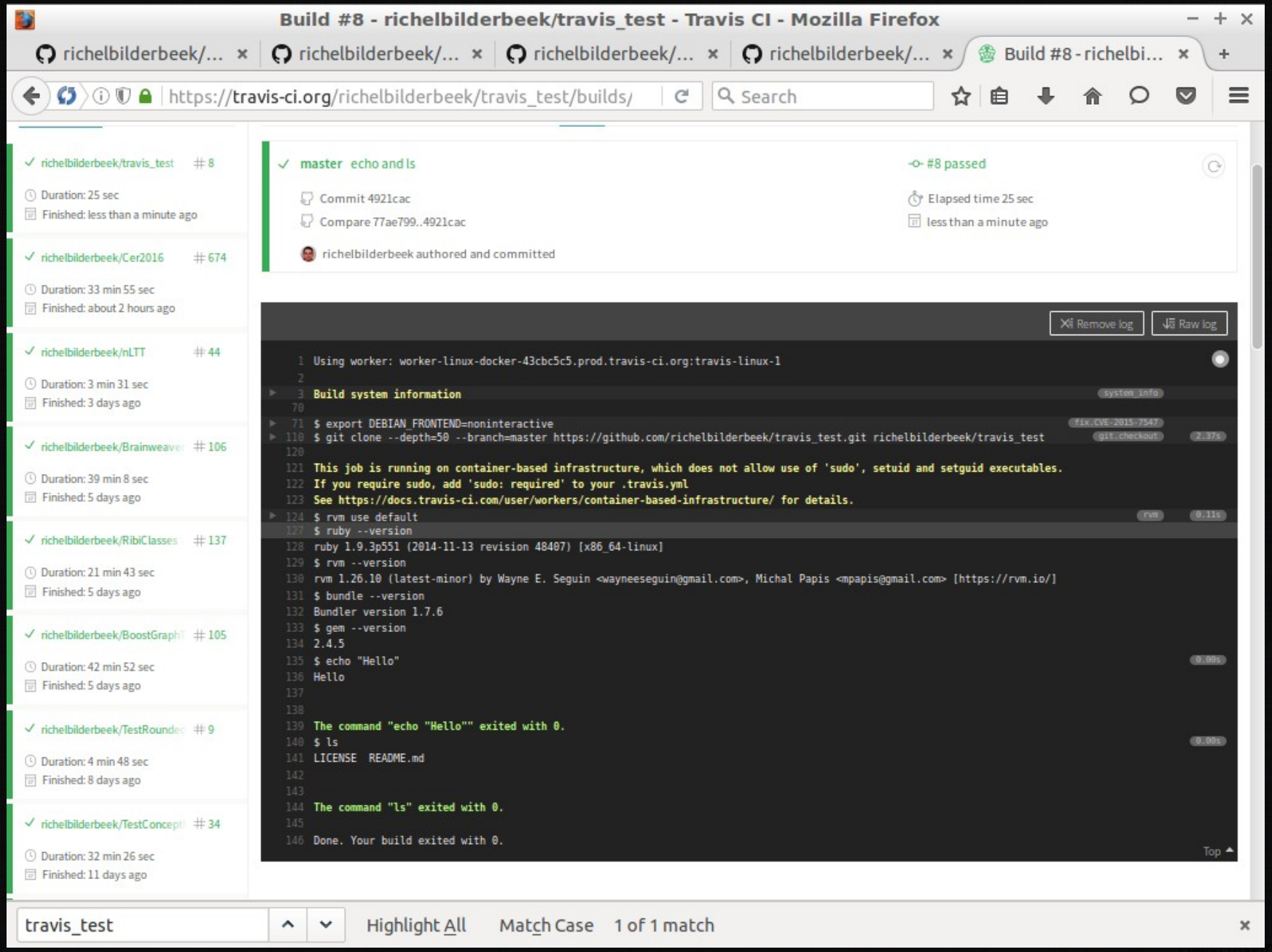
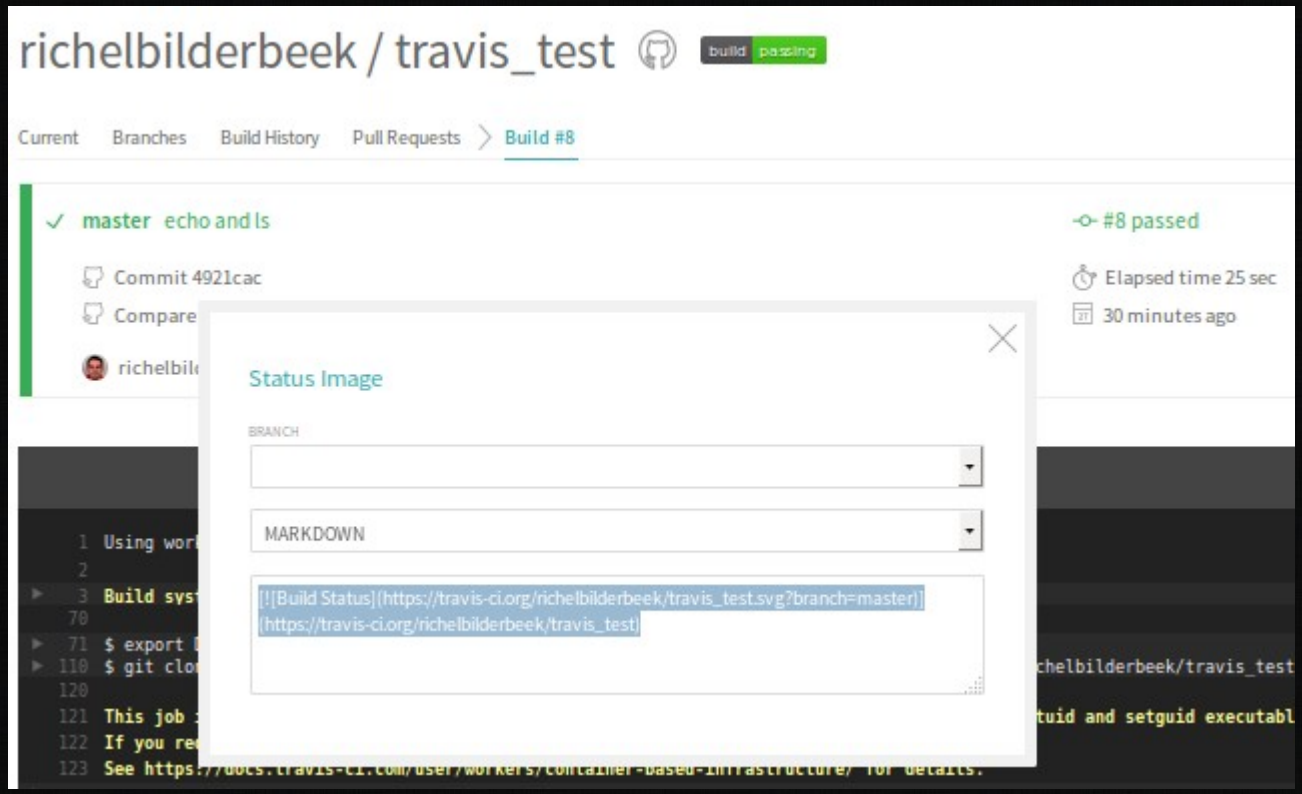
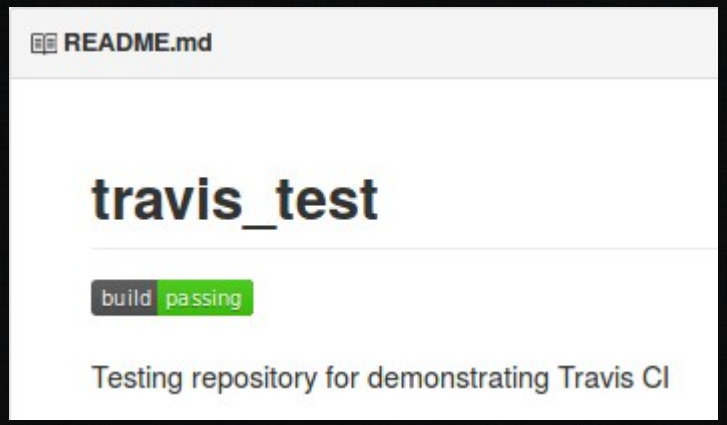
Result


Build #8 - richelbilderbeek/travis_test - Travis CI - Mozilla Firefox
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/BoostGraphT #105
Duration: 42 min 52 sec
Finished: 5 days ago
richelbilderbeek/TestRounded #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
#8 passed
Commit 4921cac
Compare 77ae799..4921cac
Elapsed time 25 sec
less than a minute ago
richelbilderbeek authored and committed
Remove log
Raw log
Using worker: worker-linux-docker-43cbc5c5.prod.travis-ci.org:travis-linux-1
Build system information
$ export DEBIAN_FRONTEND=noninteractive
$ git clone --depth=50 --branch=master https://github.com/richelbilderbeek/travis_test.git richelbilderbeek/travis_test
This job is running on container-based infrastructure, which does not allow use of 'sudo', setuid and setguid executables.
If you require sudo, add 'sudo: required' to your .travis.yml
See https://docs.travis-ci.com/user/workers/container-based-infrastructure/ for details.
$ rvm use default
$ ruby --version
ruby 1.9.3p551 (2014-11-13 revision 48407) [x86_64-linux]
$ rvm --version
rvm 1.26.10 (latest-minor) by Wayne E. Seguin <wayneeseguin@gmail.com>, Michal Papis <mpapis@gmail.com> [https://rvm.io/]
$ bundle --version
Bundler version 1.7.6
$ gem --version
2.4.5
$ echo "Hello"
Hello
The command "echo "Hello"" exited with 0.
$ ls
LICENSE README.md
The command "ls" exited with 0.
Done. Your build exited with 0.
Top
travis_test
Highlight All
Match Case
1 of 1 match

Badge





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How to get a more complex .travis.yml file

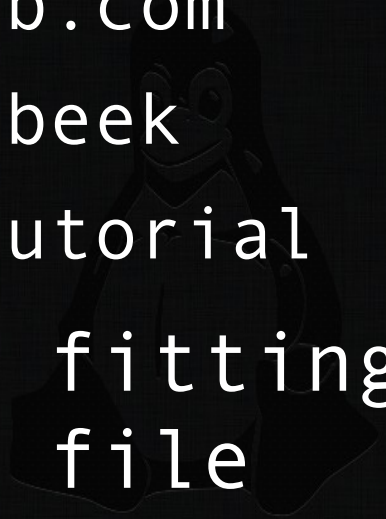
- Go to

  https://github.com

  /richelbilderbeek

  /travis_cpp_tutorial

- Copy the best fitting Travis configuration file



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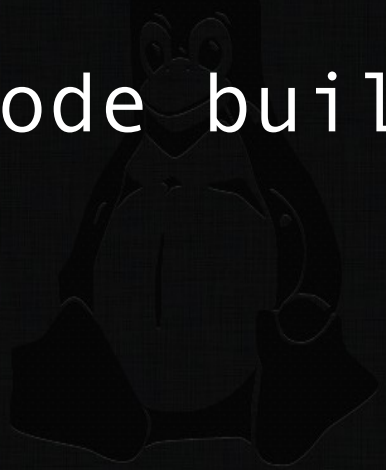
SFML example

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



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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
```

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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()'
```

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Conclusion

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

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