

# Travis CI



## Continuous Integration

Oskar Hollmann

User Technologies

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# HAVE YOU MET MR. TRAVIS?

- ▶ Travis is a Continuous Integration platform,
- ▶ free for open-source projects,
- ▶ developed in Berlin, Germany since 2011,
- ▶ used by prominent projects such as Node.js or Ruby on Rails.

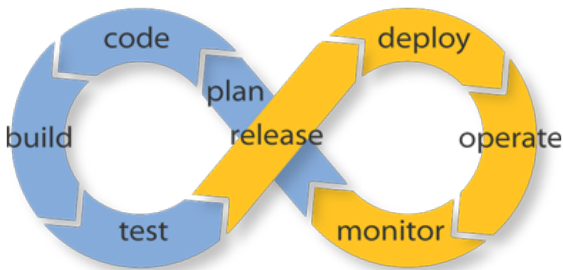


Figure: Continuous Integration diagram [[360logica.com](http://360logica.com)].



# WHAT CAN TRAVIS DO FOR YOU?

1. Automatically build Git repositories or pull requests.
2. Run all tests.
3. Integrate code coverage tools and code quality checks.
4. Deploy the code on AWS, Heroku, PyPi, RubyGems, ...

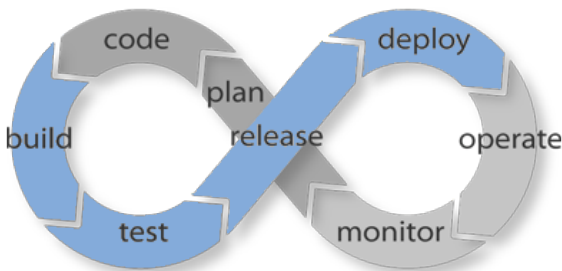
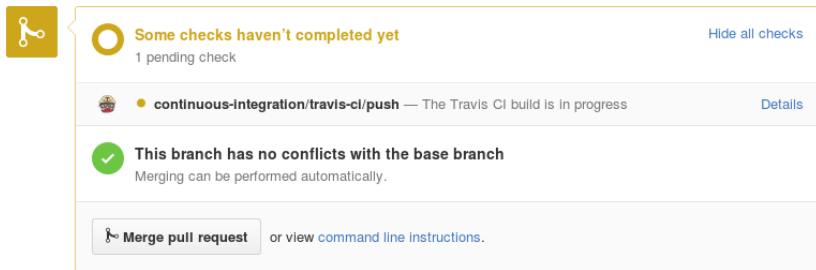


Figure: Continuous Integration diagram



# 1. DETECTION OF PULL REQUEST



A screenshot of a GitHub pull request status card. On the left is a yellow square icon with a white branching diagram. The main content area has a yellow border and contains the following elements: a yellow circle icon with the text "Some checks haven't completed yet" and "1 pending check" below it, with a "Hide all checks" link to the right; a section with a Travis CI logo icon, a yellow dot, the text "continuous-integration/travis-ci/push — The Travis CI build is in progress", and a "Details" link to the right; a green circle icon with a white checkmark, the text "This branch has no conflicts with the base branch", and "Merging can be performed automatically." below it; and a button labeled "Merge pull request" with a key icon, followed by the text "or view [command line instructions](#)."

Figure: Travis CI integrates nicely with GitHub.



## 2. TEST RUNS

[Current](#)[Branches](#)[Build History](#)[Pull Requests](#)

### ◦◦ SortImports Imports sorted

```
Jen abych spušil Travis kvůli prezentaci;)
```

 Commit f834aec Compare f834aec7f27b Oskar Hollmann authored and committed

### Build Jobs







◦ #23.1	 </> Python: 2.7	 DJANGO_VERSION=1.6
◦ #23.2	 </> Python: 2.7	 DJANGO_VERSION=1.7
◦ #23.3	 </> Python: 2.7	 DJANGO_VERSION=1.8
◦ #23.4	 </> Python: 2.7	 DJANGO_VERSION=1.9

Figure: Tests are run using chosen versions of languages and libraries.



## 2. TEST RUNS

[Current](#) [Branches](#) [Build History](#) [Pull Requests](#)

### ✓ Pull Request #2 Imports sorted

Imports sorted

```
Jen abych spušil Travis kvůli prezentaci;}
```

📄 Commit 3004857

📄 #2: Imports sorted

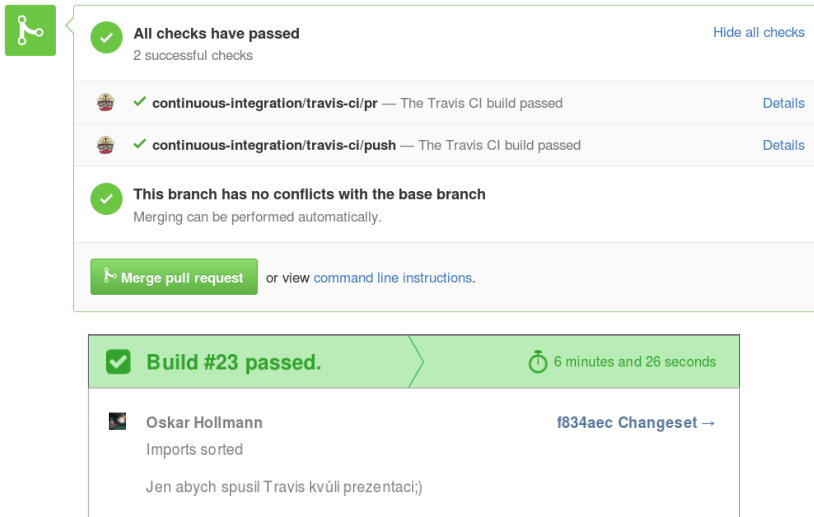
👤 Oskar Hollmann authored and committed

### Build Jobs


✓ # 24.1	🐙 </> Python: 2.7	📦 DJANGO_VERSION=1.6
✓ # 24.2	🐙 </> Python: 2.7	📦 DJANGO_VERSION=1.7
✓ # 24.3	🐙 </> Python: 2.7	📦 DJANGO_VERSION=1.8
✓ # 24.4	🐙 </> Python: 2.7	📦 DJANGO_VERSION=1.9





### 3. REPORT RESULTS




The image displays two Travis CI status cards. The top card, titled 'All checks have passed', shows two successful checks: 'continuous-integration/travis-ci/pr' and 'continuous-integration/travis-ci/push', both indicating that the Travis CI build passed. It also states 'This branch has no conflicts with the base branch' and provides a 'Merge pull request' button. The bottom card, titled 'Build #23 passed.', shows the build duration as '6 minutes and 26 seconds' and lists the author 'Oskar Hollmann' with a link to the 'f834aec Changeset'.

 **✓ All checks have passed** [Hide all checks](#)  
2 successful checks


 **✓ continuous-integration/travis-ci/pr** — The Travis CI build passed [Details](#)

 **✓ continuous-integration/travis-ci/push** — The Travis CI build passed [Details](#)

**✓ This branch has no conflicts with the base branch**  
Merging can be performed automatically.

 **Merge pull request** or view [command line instructions](#).

---

**✓ Build #23 passed.**  6 minutes and 26 seconds


 **Oskar Hollmann** [f834aec Changeset →](#)  
Imports sorted  
Jen abych spasil Travis kvůli prezentaci;)

Figure: Results are pushed to Github and e-mail.



# CONFIGURATION

- ▶ Tests run in a sandboxed Ubuntu Docker image.
- ▶ Configuration contained in a single **.travis.yml** file.
- ▶ Many stages of the test ran can be customised:
  - ▶ addons
  - ▶ before\_install
  - ▶ install
  - ▶ before\_script
  - ▶ script
  - ▶ after\_success/after\_failure
  - ▶ before\_deploy/deploy/after\_deploy
  - ▶ after\_script

```
addons:  
  apt:  
    packages:  
      - cmake
```





## EXAMPLE CONFIGURATION FILE

```
language: python
```

```
# Which version of the language to support?
```

```
python:
```

- "2.7"
- "3.5"

```
# Enviroment variables can be used to setup builds  
# and test multiple versions of libraries
```

```
env:
```

- DJANGO\_VERSION=1.7
- DJANGO\_VERSION=1.8
- DJANGO\_VERSION=1.9



## EXAMPLE CONFIGURATION FILE

```
# All combinations of env. vars are tested  
matrix:
```

```
  exclude: # But some may not be supported
```

```
    - python: "3.3"
```

```
      env: DJANGO_VERSION=1.9
```

```
# Install required dependencies
```

```
install:
```

```
  - cd example
```

```
  - pip install -r requirements/base.txt
```

```
  - pip uninstall -y -q django
```

```
  - pip install -q Django==$DJANGO_VERSION
```

```
# We can override the default build step
```

```
script:
```

```
  coverage run manage.py test app.tests
```



Thank you for your attention.

Any questions?

