Buildtime Trend
What’s trending in your build process

Dieter Adriaenssens
Buildtime Trend founder & developer - @dcadriaenssens

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Overview

- What is Buildtime Trend?
- How does it work?
- How to start using it
- Demo
Buildtime Trend is an Open Source application that uses (timing) data to visualise trends in a build process.
It started with an itch

Project with unreliable builds on Travis CI:
- some builds took longer than others
- no timing information was present in the logs
- which stage took longer?
Proof of concept

A script to generate a chart with duration of build stages: 

Build stages trend

- install_android_sdk
- test
- coverage
- build
- install_python_libs
- install_libs
- update_javadoc

Duration [s]

Builds
First release - dashboard

- Total builds: 38
- Builds passed: 35
- Builds failed: 3
- Average build time: 119s

**Average build stage duration**

- Tests
- Coveralls
- Install

**Build stage fraction**

- Install: 98.7%
- Coveralls: 1.3%
- Tests: 0%

**Builds per branch**

- cone-color
- debug_branches
- master

**Builds per branch (%)**

- master: 94.5%
- debug_branches: 5.4%
- cone-color: 0.1%

Powered by [buildtime trend](https://buildtime.com) (0.1).
How it works

Webservice is triggered at the end of a build:

- download Travis CI build logfile
- parse the (timing) data
- store data
- visualise using a dashboard with charts
Keen IO’s powerful APIs do the heavy lifting for you, so you can gather all the data you want and start getting the answers you need.
Hosting the service

- CherryPy turns scripts into webservice
  - dashboard
  - badges
  - buildjob log parser
- service hosted on Heroku:
  https://buildtimetrend.herokuapp.com/
How to use it

Trigger the service at the end of a Travis CI build in `.travis.yml`:

Example

```plaintext
notifications:
  webhooks:
    - https://buildtimetrend.herokuapp.com/travis
```
Who can use it

- Webservice: free for Open Source (for now)
  - Keen.io offered to host data for Open Source projects. Thanks, guys!
- Source code available on Github
  - service: host it yourself
  - client: implement in your build process
Who is using it

- Angular
- RocksDB (Facebook)
- phpMyAdmin
- Weblate
- MuseScore
- Servo
- pyca/cryptography
- Pootle
- ...

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Demo

- Service: https://buildtimetrend.herokuapp.com/
- Badges:
  https://github.com/buildtimetrend/service#badge-examples
Future development

- more and improved metrics and charts
- improve navigation and searching on dashboard
- support other CI platforms (Jenkins, ...)
- notifications
Contributions welcome

- use and test the service
- report bugs
- suggest improvements
- clone the project and send pull requests
  - implement a feature
  - fix a bug
  - add a new chart
  - improve dashboard layout
  - ...

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Big thanks to

- The nice people of Keen.io, for their invaluable support!
- the Open Source projects testdriving the service
- all the services that power the project
Questions

Thanks for your attention!

@dcadriaenssens

Presentation available on https://ruleant.github.io/presentations/

Buildtime Trend

- Website : https://buildtimetrend.github.io/
- Service : https://buildtimetrend.herokuapp.com/
- Twitter : @buildtime_trend