Continuous Integration & Delivery

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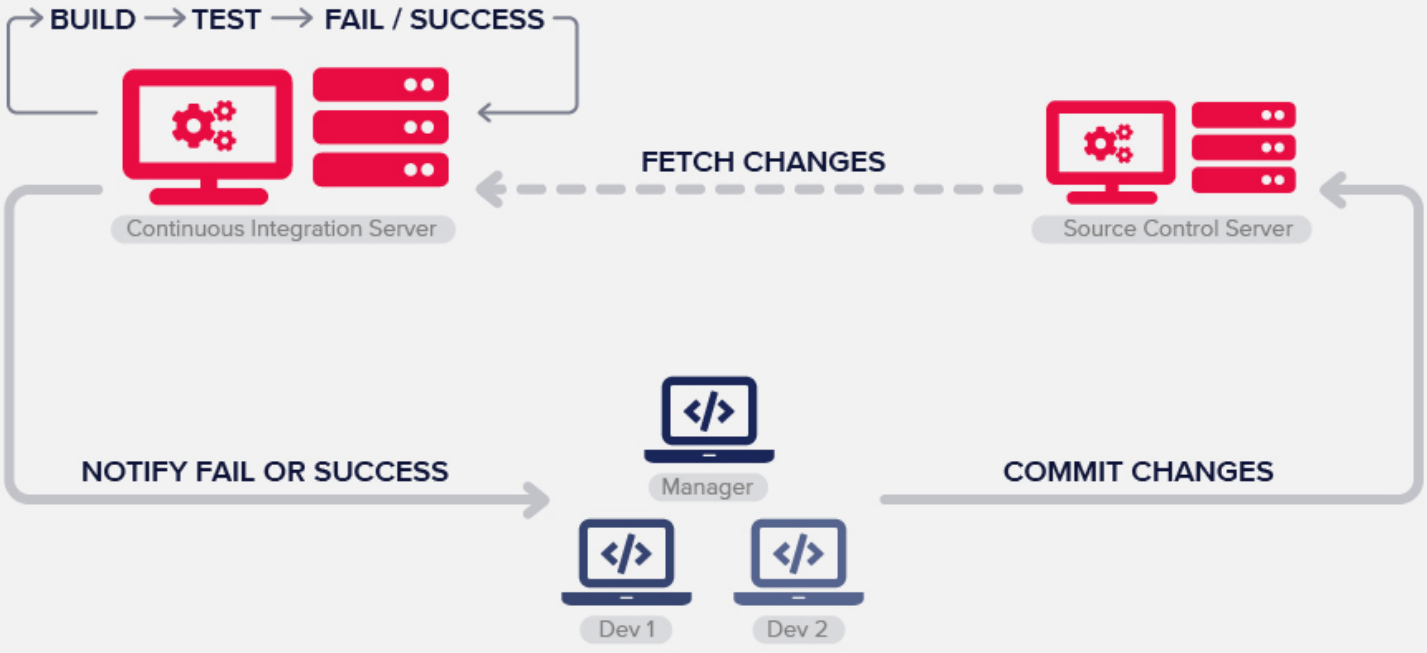
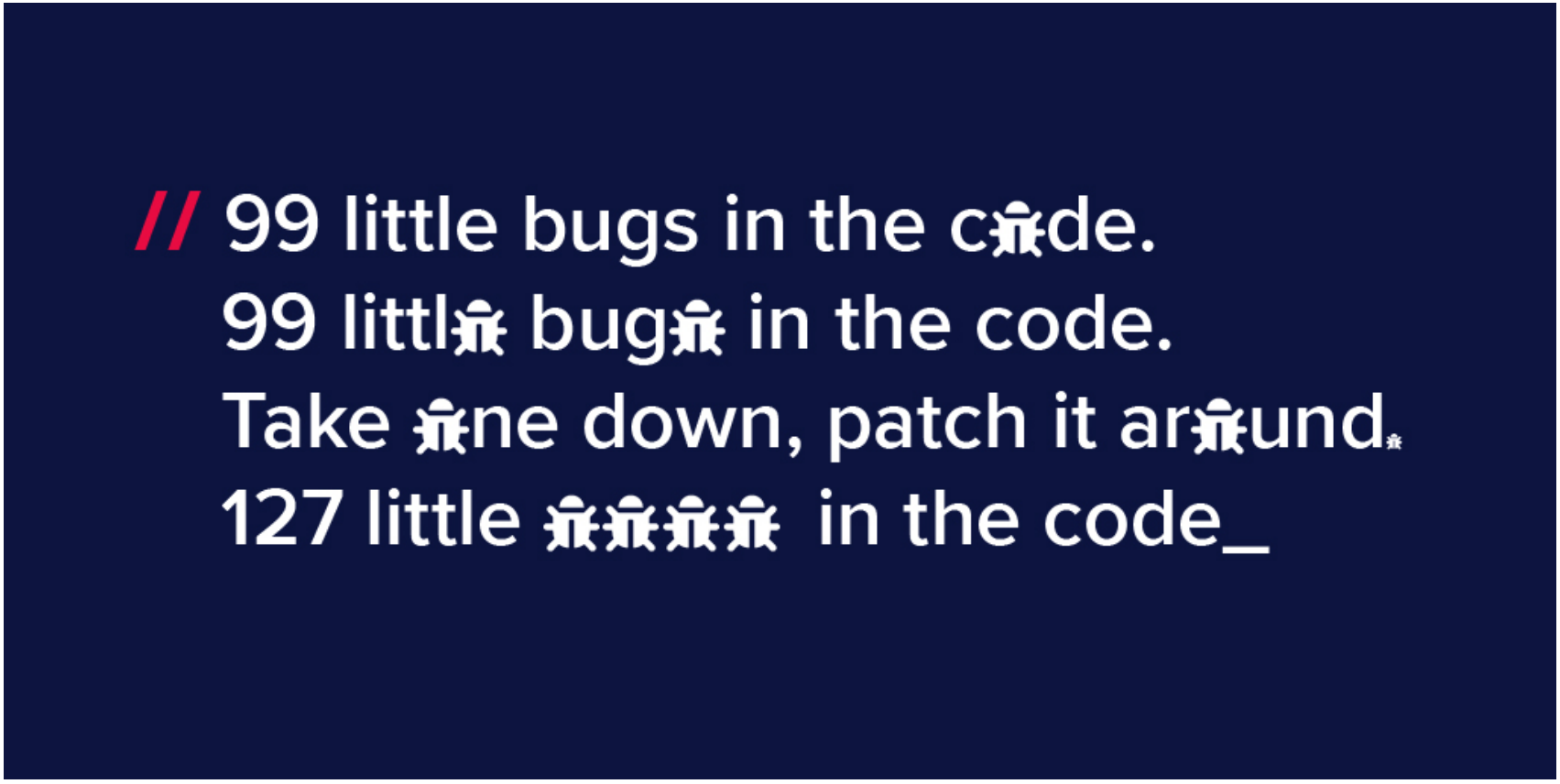
Continuous Integration

Continuous Integration (CI) is a development practice of updating application code frequently thus spawning automatic builds and checks to alert the developer earlier of possible bugs or errors.

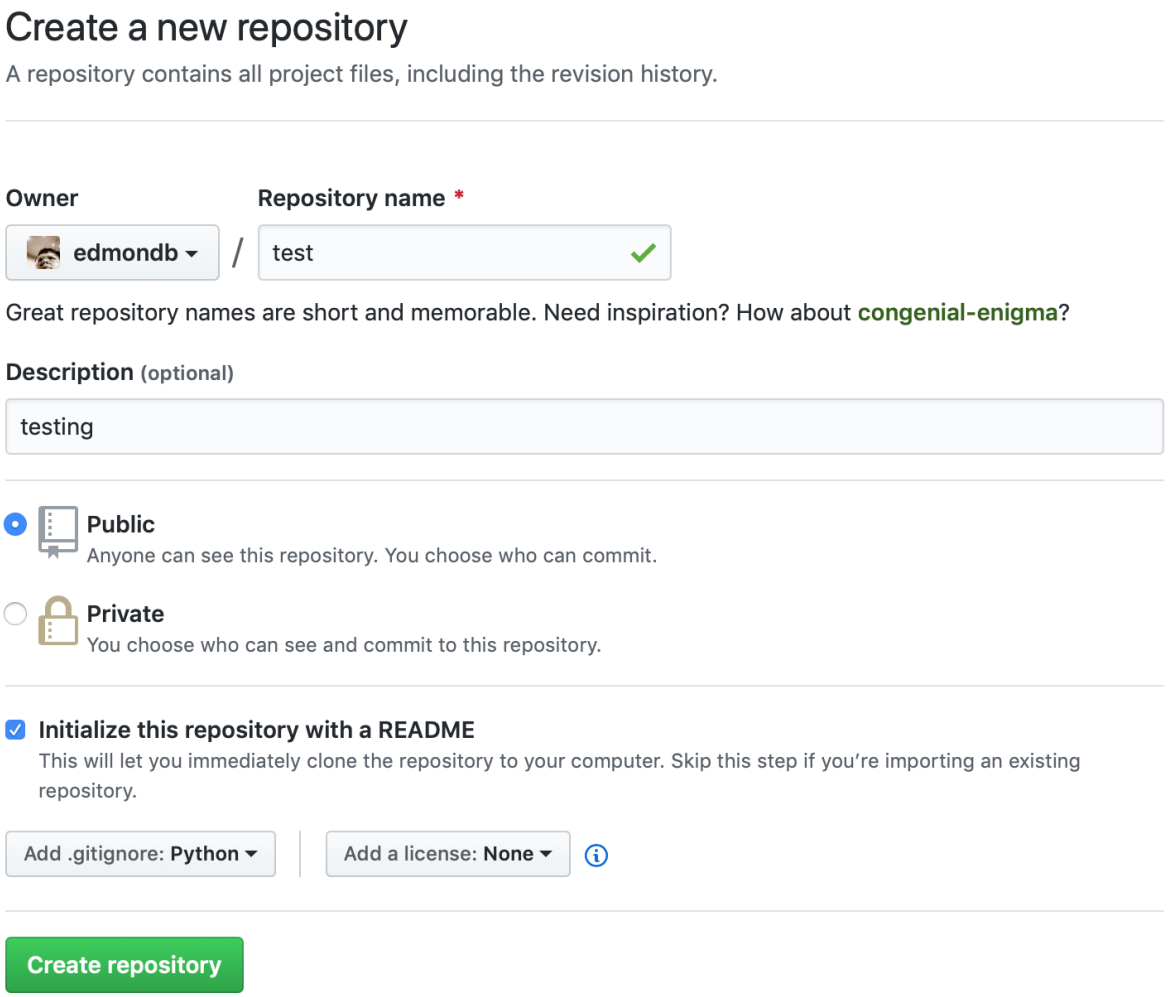


An Example of Benefits



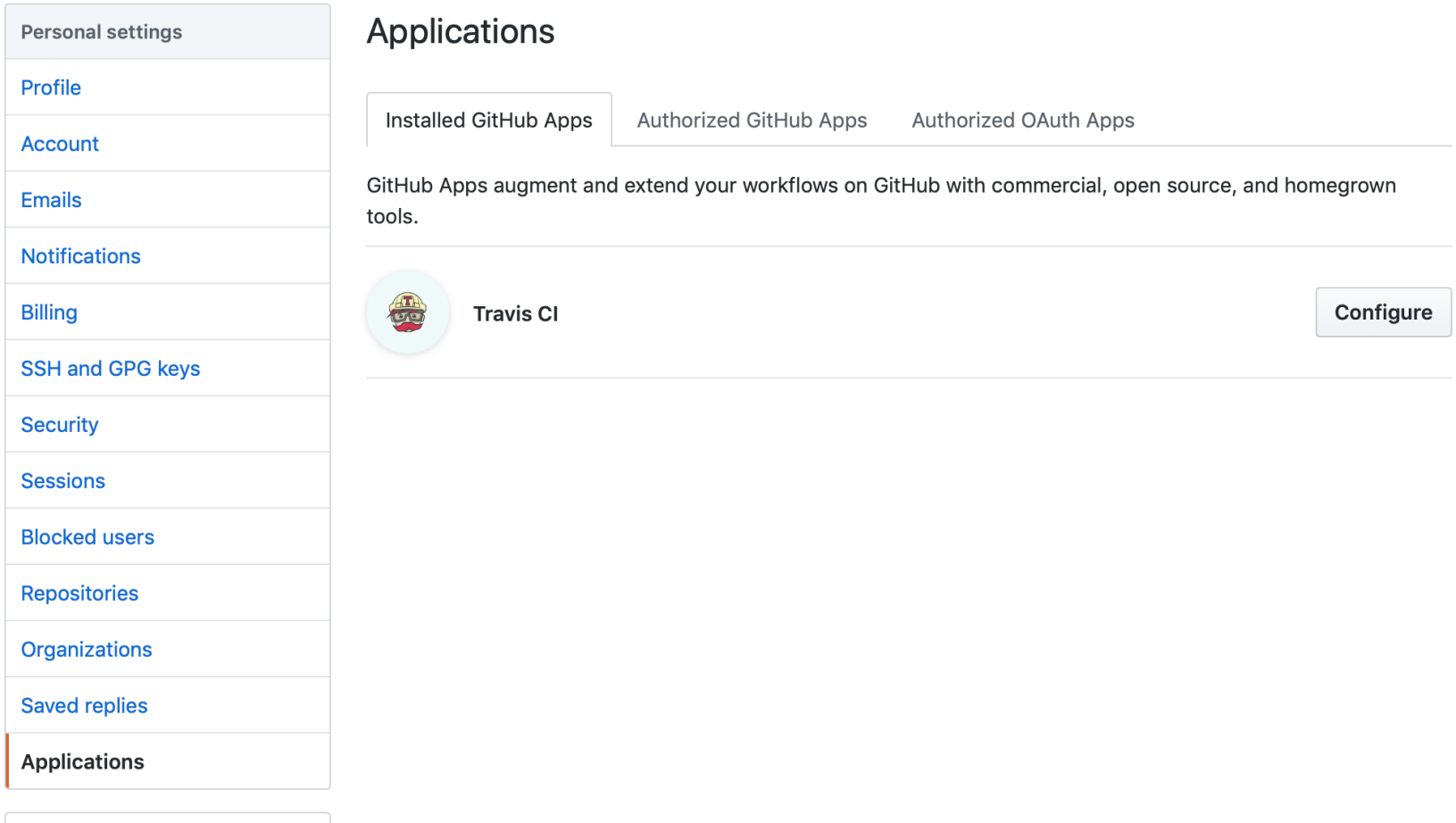
GitHub Repository

We are going to start with a new GitHub repository for a Python application:



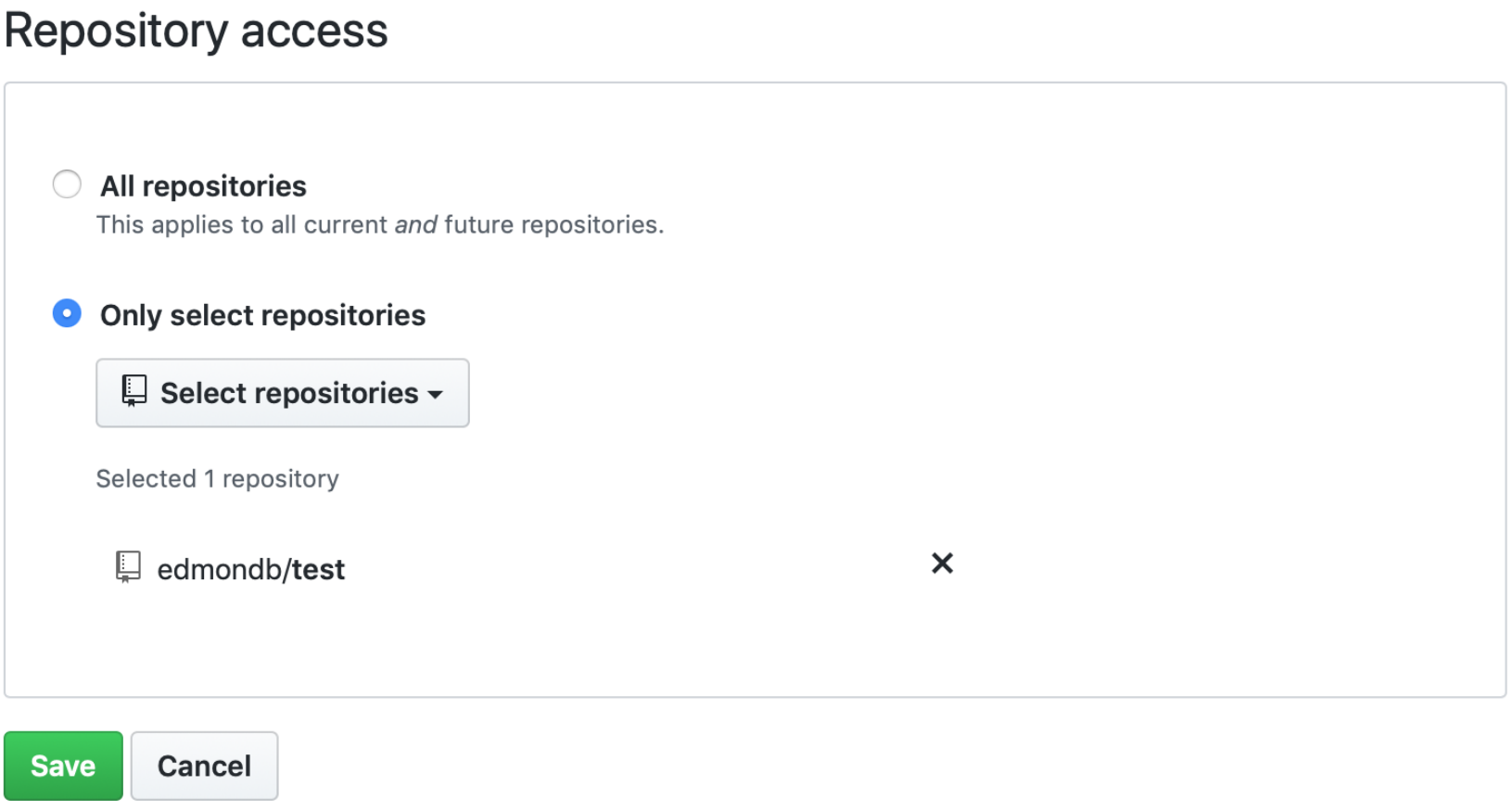
Add to Travis CI

If you have already associated Travis CI with your GitHub account, then you can add your new repository to Travis CI. You will need to go to your GitHub settings (under your profile icon):



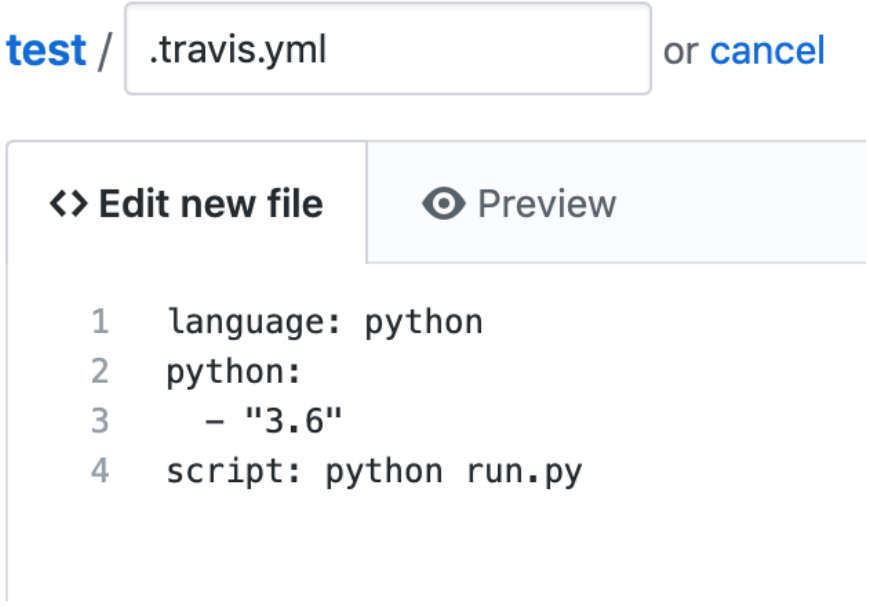
Give Travis CI Access

Select your new repository in the Travis CI configuration:



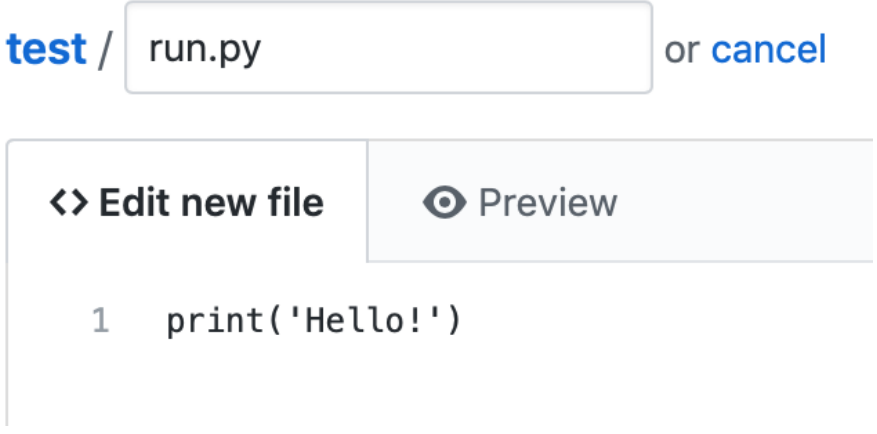
Add a travis YAML file

After setting the configuration of the Travis CI utility within GitHub, your browser should be now showing a Travis CI webpage. Let's go back to GitHub and add the proper file(s) so that Travis CI can build the application.



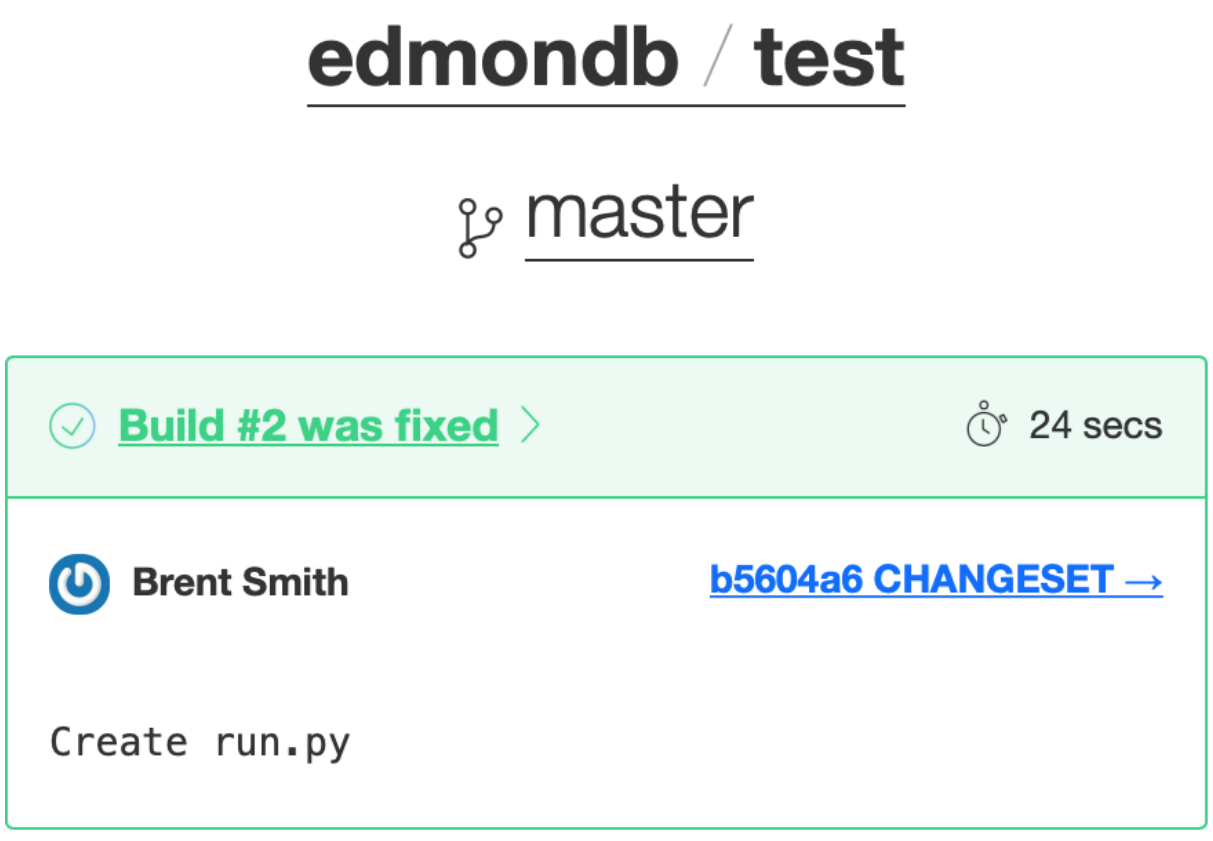
Build your application

After the commit of our .travis.yml file, the Travis CI will build/attempt to run our application periodically **AND** for every subsequent commit. Let's add the run.py file so that we can see how a success looks:



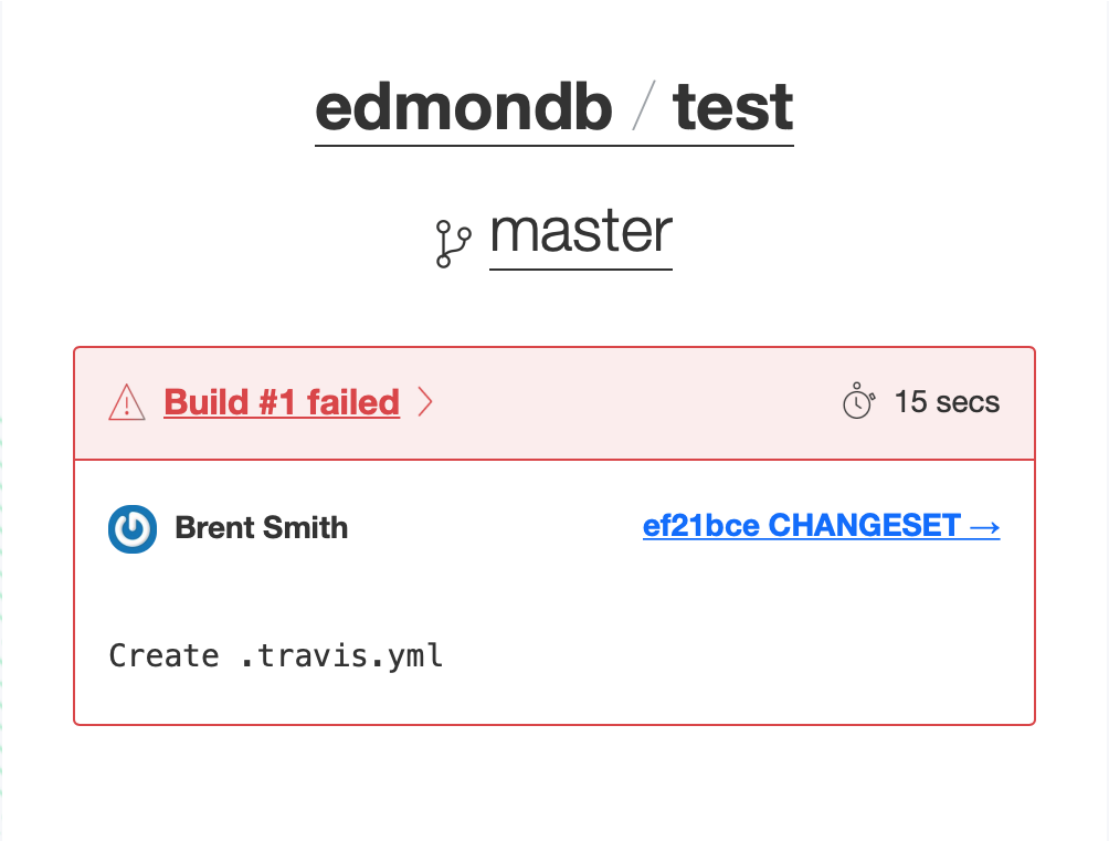
Build your application

After the commit, a Travis CI build is triggered and thus runs the code line `python run.py` with a success message like below:



Failed Builds

If we had waited before adding the run.py file, or had put something in that Python script that broke (perhaps by just removing the parentheses), we would receive an error email like the following:



Resources

- Github-Travis CI
- Travis CI
- Jenkins
- GitLab
- aws.amazon.com/devops/continuous-integration/
- CI Tutorial
- www.thoughtworks.com/continuous-integration
- codeship.com/continuous-integration-essentials
- dzone.com/articles/what-is-continuous-integration-1
- Microsoft Azure
- Atlassian Bamboo

Questions?