Continuous Integration

with Jenkins

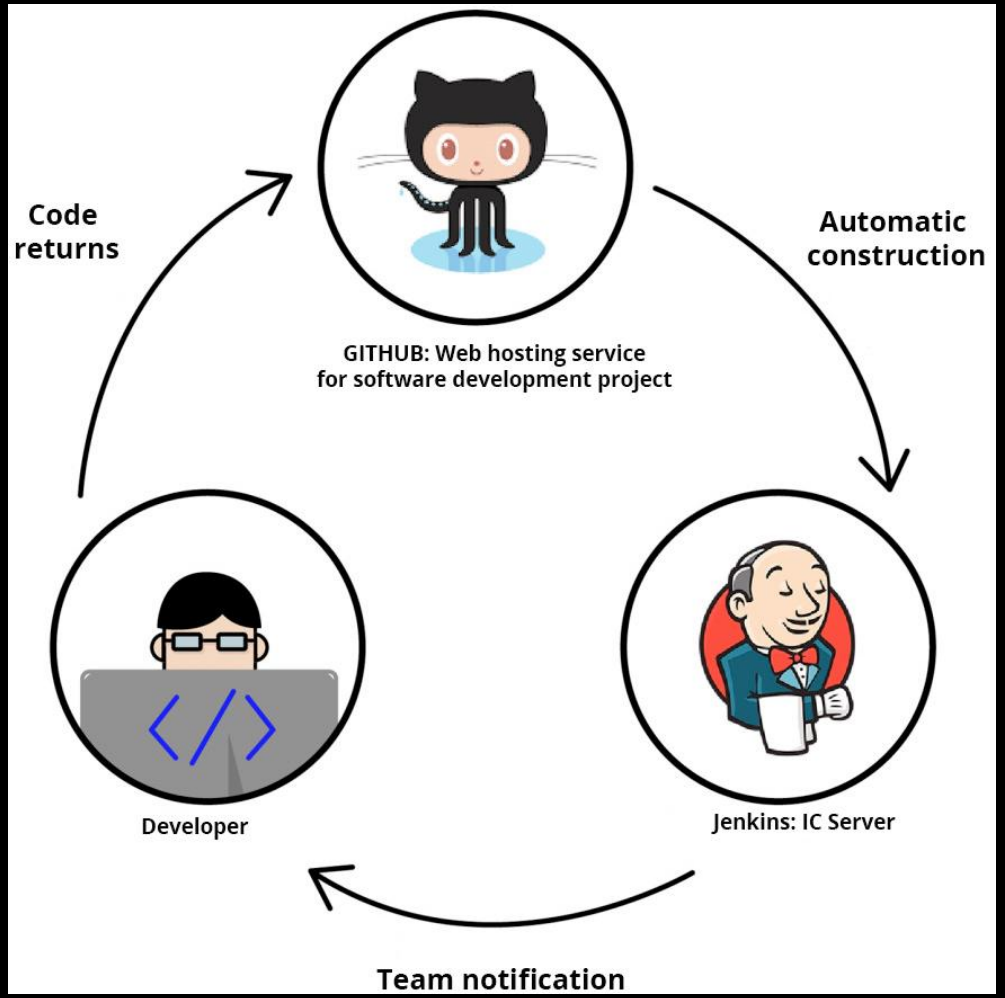
Continuous Integration

...?

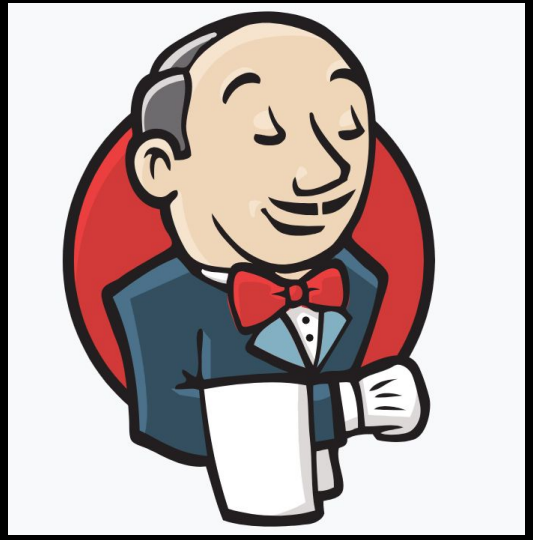
Continuous Integration

In its simplest form, it involves a tool that monitors your version control system for changes. Whenever a change is detected, this tool automatically compiles and tests your application. If something goes wrong, the tool immediately notifies the developers so that they can fix the issue immediately.

- Continuous Integration
- Github
- Jenkins

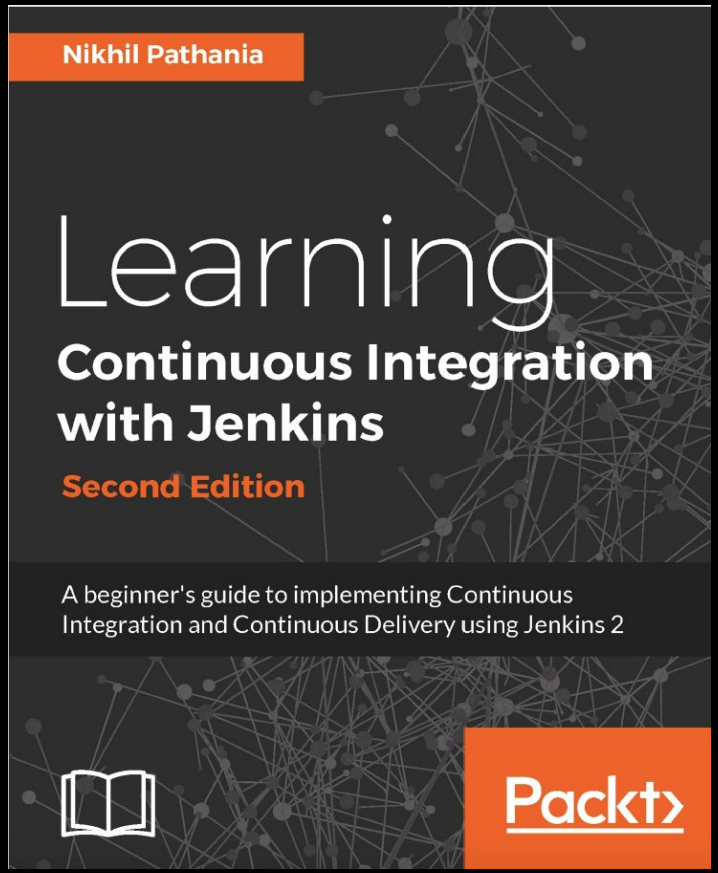


Jenkins



https://jenkins.io/

Suggested Book



Hands on!

Hands on!

Step 0 Download https://github.com/FabrizioFornari/BasicJUnitTests
Step 1 Upload BasicJUnitTests on your Github
Step 2 Download and Setup Jenkins https://jenkins.io/
Step 3 Configure Jenkins to test and build BasicJUnitTests
Step 4 Enjoy! :D

Hands on...

1. How was it?
2. Did you manage to run Jenkins?
3. Did you run it on Tomcat?
4. Did you run test over a project on Github?

Running tests...

Hands on!

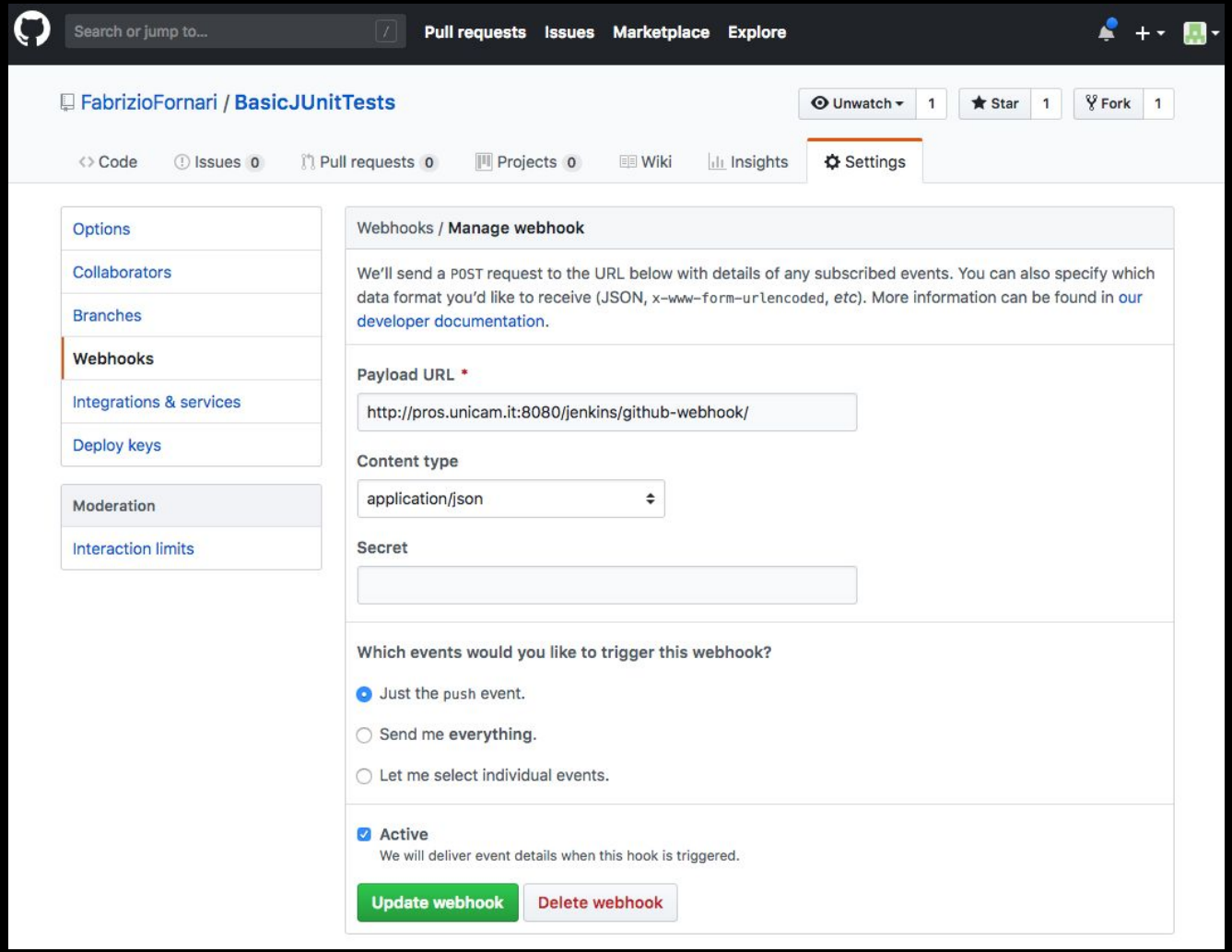
Hands on!

Step 0 You must have completed the first “hands on” steps.
Step 1 Link Jenkins to your Github project and run tests after project changes (push)

Webhook

- Webhooks allow you to build or set up GitHub Apps which subscribe to certain events on GitHub.com.
- When one of those events is triggered, we'll send a HTTP POST payload to the webhook's configured URL.
- Webhooks can be used to update an external issue tracker, trigger CI builds, update a backup mirror, or even deploy to your production server.

https://developer.github.com/webhooks/


Search or jump to...
Pull requests
Issues
Marketplace
Explore
FabrizioFornari / BasicJUnitTests
Unwatch 1
Star 1
Fork 1
Code
Issues 0
Pull requests 0
Projects 0
Wiki
Insights
Settings
Options
Collaborators
Branches
Webhooks
Integrations & services
Deploy keys
Moderation
Interaction limits
Webhooks / Manage webhook
We'll send a POST request to the URL below with details of any subscribed events. You can also specify which data format you'd like to receive (JSON, x-www-form-urlencoded, etc). More information can be found in our developer documentation.
Payload URL *
http://pros.unicam.it:8080/jenkins/github-webhook/
Content type
application/json
Secret
Which events would you like to trigger this webhook?
Just the push event.
Send me everything.
Let me select individual events.
Active
We will deliver event details when this hook is triggered.
Update webhook
Delete webhook

Hands on!

(Webhook)

http://pros.unicam.it:8080/jenkins

1. One per group will receive access to Jenkins server
2. Do what you did for the previous “hands on”
3. Define a Webhook for running tests on project updates
4. Set up E-mail notification

Shields IO

Project

1. Try to develop some test for you project
   a. JUnit Tests
   b. Selenium Tests

2. Try to automatize your test by means of Jenkins
   a. http://pros.unicam.it:8080/jenkins
   b. or http://localhost:8080/jenkins (if we you have issue with the server)

3. Show us something during the final Sprint meeting

Last but not least...

Not only Jenkins

TRAVIS CI

https://travis-ci.org/

Travis CI

Travis CI is a hosted, distributed continuous integration service used to build and test software projects hosted at GitHub.

Travis CI is configured by adding a file named .travis.yml, which is a YAML format text file, to the root directory of the repository.

```
# this is a java project using maven
language: java
# install
install: mvn install
```

Travis CI Documentation: https://docs.travis-ci.com/

Hands on!

Travis CI

Step 0 Add .travis.yml to your Github repository
Step 1 Synchronize your Github account with Travis
Step 2 Trigger a build with Travis

Travis CI Documentation: https://docs.travis-ci.com/