Travis vs Jenkins
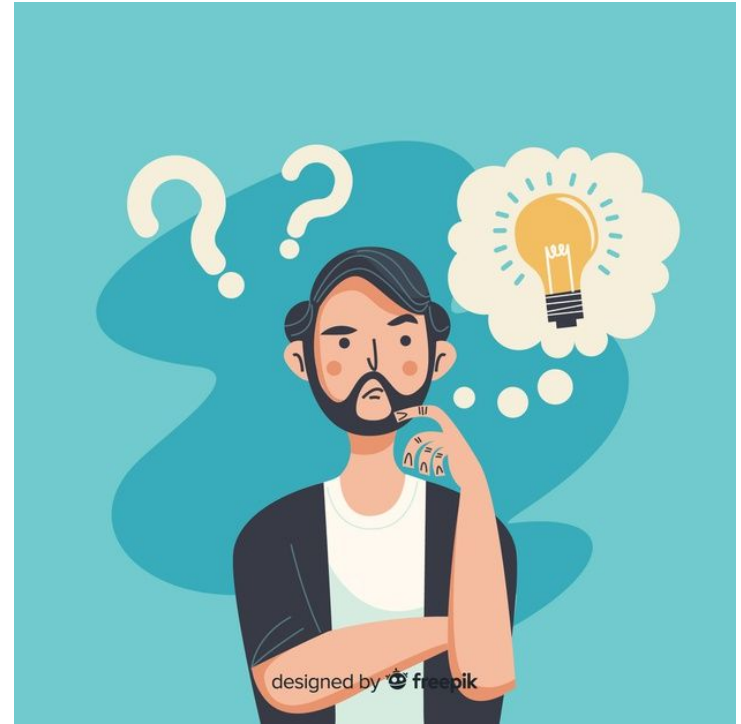
A comparison by two inexperienced CI users

Why is this interesting?

- Inexperienced users - onboarding experience.

- Travis and Jenkins are popular CI tools, widely used by open source projects and industry.

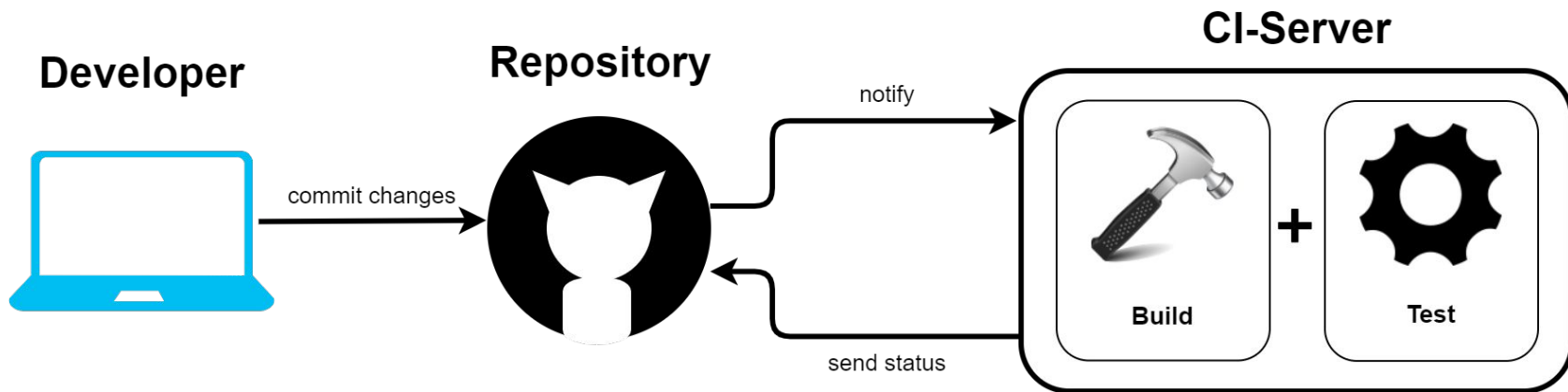Source: https://www.freepik.com/free-vector/flat-thinking-concept_4457224.htm

Why is this presentation original, what is unique?

- We present our onboarding experience on the setup and usage of the tools.

- Beginners - we might find steps missing in the documentation.
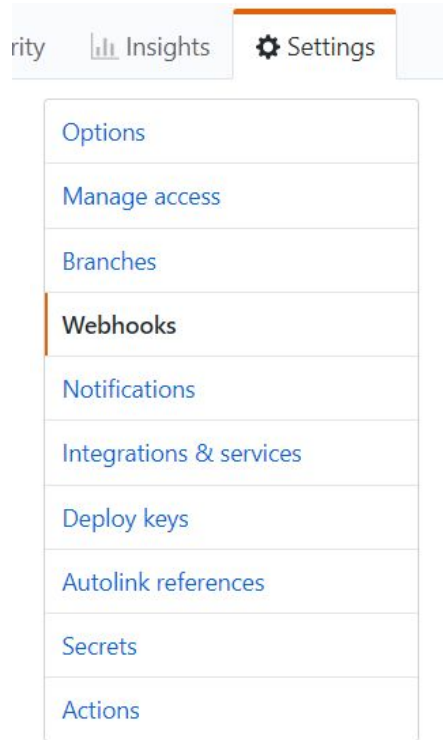
What will be presented?

1. What is a CI server?
2. Webhook? A very Github explanation
3. What is Travis?
4. What is Jenkins?
5. Some of the main differences.
6. Onboard experience by two noobs.
7. Pros and Cons.
8. Take-home message

CI-Server, simplified

Webhook? A very Github explanation

- Allows to set up integrations, such as GitHub Apps or OAuth Apps, which subscribe to events on GitHub.

- When events are triggered, a HTTP POST payload is sent to the webhook's configured URL.

- The payload usually contains a large amount of information.

What is Travis CI?

- Hosted CI service.
- One of the earliest solutions to offer CI as a service.
- Can be used for building, testing and deployment.

source: https://travis-ci.com/logo

What is Jenkins?

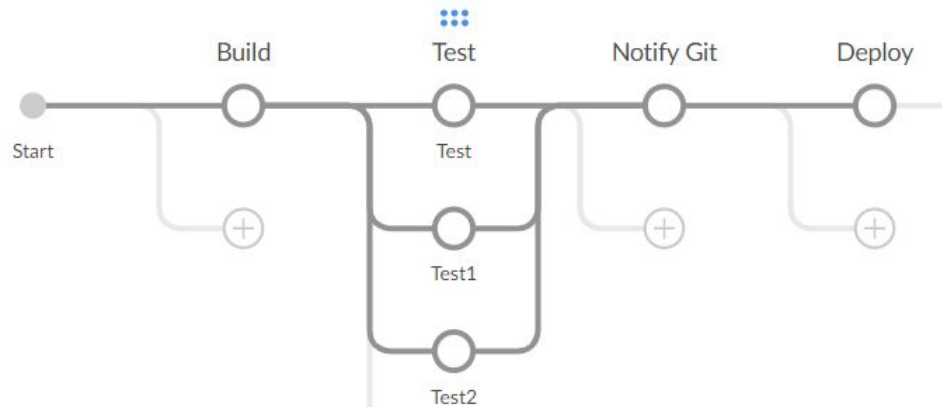- Open source automation server.
- Extendable via plug-ins.
- Commonly teams/companies maintains their own dedicated Jenkins server(s).

source: https://jenkins.io/

Jenkins, Pipelines, How does it work?
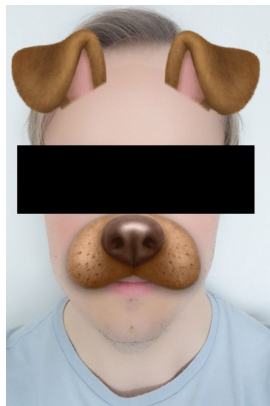
Main differences

Travis-CI

- Hosted service
- Not open-source
- Free hosting for open source projects.
- Github App support.

Jenkins

- Downloadable software
- Open-source
- Free
- Pipeline
- Multiple plugin

2 Noobs exploration of CI

Travis - installation

Repository access

Travis CI suggested installation on all repositories.

○ **All repositories**
This applies to all current *and* future repositories.

◉ **Only select repositories**

📖 Select repositories ▾

Selected 1 repository.

📖 jonasjohansson8908/**hello-travis**   ✕

Approve and install   Cancel

Travis - setup

Kinda guessing:

```
■■■□□  .travis.yml
...    @@ -0,0 +1,3 @@
1      + language: java
```

Repo, consisting of:

- A well-crafted piece of software

```java
public class App {
    public static void main(String[] args) {
        System.out.println("Hello Travis");
    }
}
```

- And of course rigorous tests.

```java
public class AppTest
{
    /**
     * Rigorous Test :-)
     */
    @Test
    public void shouldAnswerWithTrue()
    {
        assertTrue( true );
    }
}
```

Done?

All checks have failed
1 failing check

❌ 🧑‍🔧 **Travis CI - Branch** — Build Failed   Details

```
191  $ ant test
192  Buildfile: build.xml does not exist!
193  Build failed
194  The command "ant test" exited with 1.
195
196
197  Done. Your build exited with 1.
```

...did i choose Ant?

Seems reasonable that you
need a build tool.

(ant was default)

Switched to Maven

- Extensive yml-file

```
1 lines (1 sloc)    14 Bytes

1    language: java
```

- Success!

All checks have passed
1 successful check

✓ 🧕 **Travis CI - Branch** — Build Passed   Details
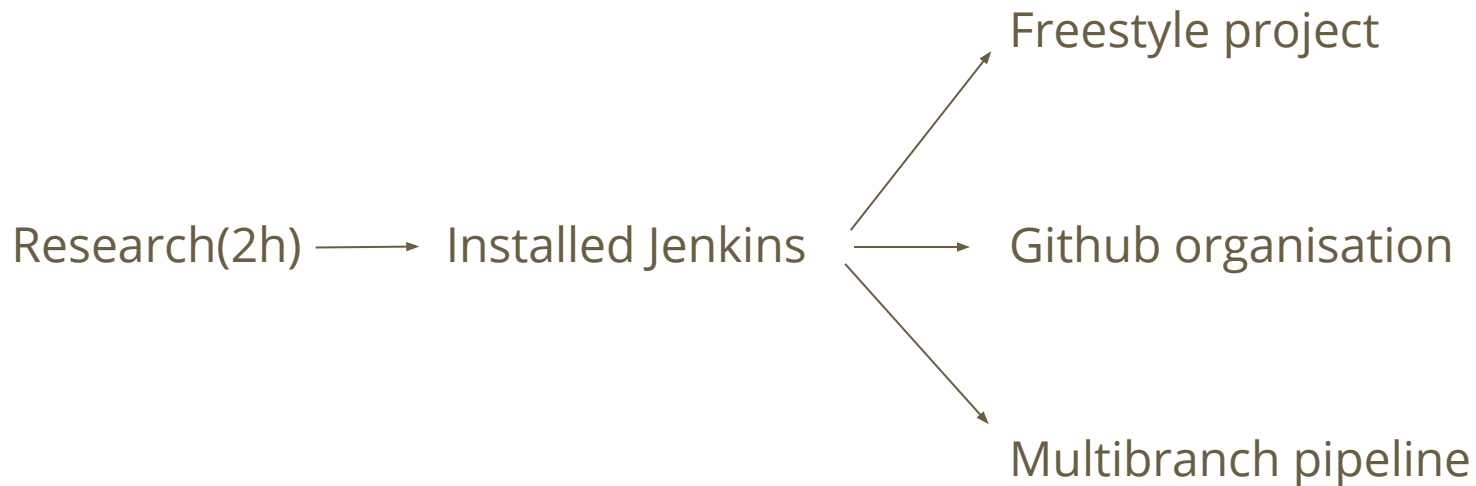
Travis - Pros and Cons

Pros

- Hosted - no maintenance needed.
- Easy setup.
- Free hosting for open source projects.
- Images pre-installed with many packages.
- Most common languages supported.

Cons

- Hosted - You rely on 3rd party.
- Limited configurability (still good!).
- Subscription fee for private repos.
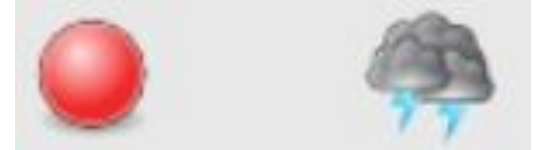- Building is quite slow.
- Not very customizable

source images: https://docs.travis-ci.com/user/reference/overview/

Jenkins, Timeline

Research(2h) ⟶ Installed Jenkins

Freestyle project

Github organisation

Multibranch pipeline

Jenkins, Timeline

Freestyle project

Github organisation → Attached link to Github   and....
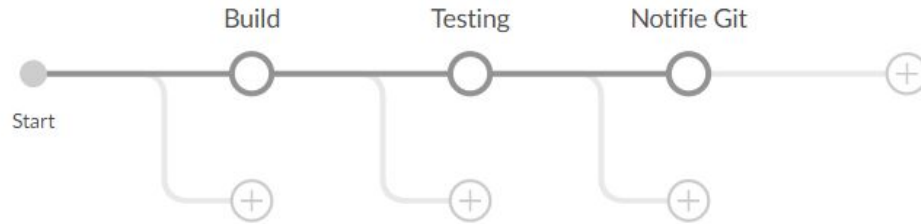
Multibranch pipeline

Jenkins, Timeline

- Download all dependencies related to git

- Realising that Jenkins can't find git at my computer

- No pipeline

Then, we found Blue Ocean
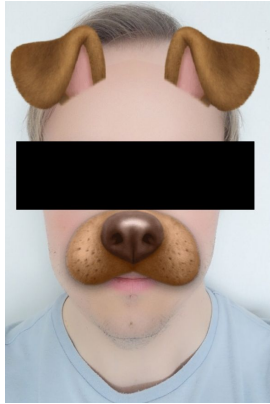
Pros and Cons, Jenkins

Pros

- Customisable.
- Large community support with plug-ins.
- Fast to setup (if you know what you are doing).
- Gives a combined interface for all functions related to the project.
- A tutorial exists.

Cons

- Maybe a bit too customisable.
- Still lists deprecated plug-ins, unclear.
- Took as about 10 hours to solve setup-related problems.
- You now have several web-pages for managing the project.
- The tutorial assumes that everything works when it is installed.

So... what would the noobs use

Travis, at least for my own small projects.

Jenkins, harder to use but you have more freedom.

Take-home message

Our experience:

- If you want a tool that is hosted and easy to setup, pick Travis.

- If you want a large powerful tool, pick Jenkins. Be prepared to learn shell scripts and spend some time with setup

Your pick?

https://forms.gle/mqZjAc6dzhgPbajZ8

Questions?