# Continuous integration

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  - Freelance developer & consultant
- Practice of CI
  - Principles
  - Pros and cons
- Drupal and CI
- Example
  - Paddle distribution by Kanooh.be

# Practice of CI

- Frequently integrating one's new or changed code with the existing code repository.

- Aim is to prevent integration problems

- Intended to be used in combination with automated unit tests

Source: Wikipedia

# Practice of CI
## Principles

1. Maintain a code repository
2. Automate the build
3. Make the build <u>self-testing</u>
4. Test in a clone of the production environment
5. Make it easy to get the independent versions
6. Everyone can see the results of the latest build
7. Automate deployment

Source: Wikipedia

# Practice of CI

## Pros

- Immediate feedback on the quality
- Early warning of conflicting/broken code
- Focus developers on developing functional, quality code
- Quick and frequent deployments
- Saving time

## Cons

- Initial setup (time and resources)

# What do you need for CI
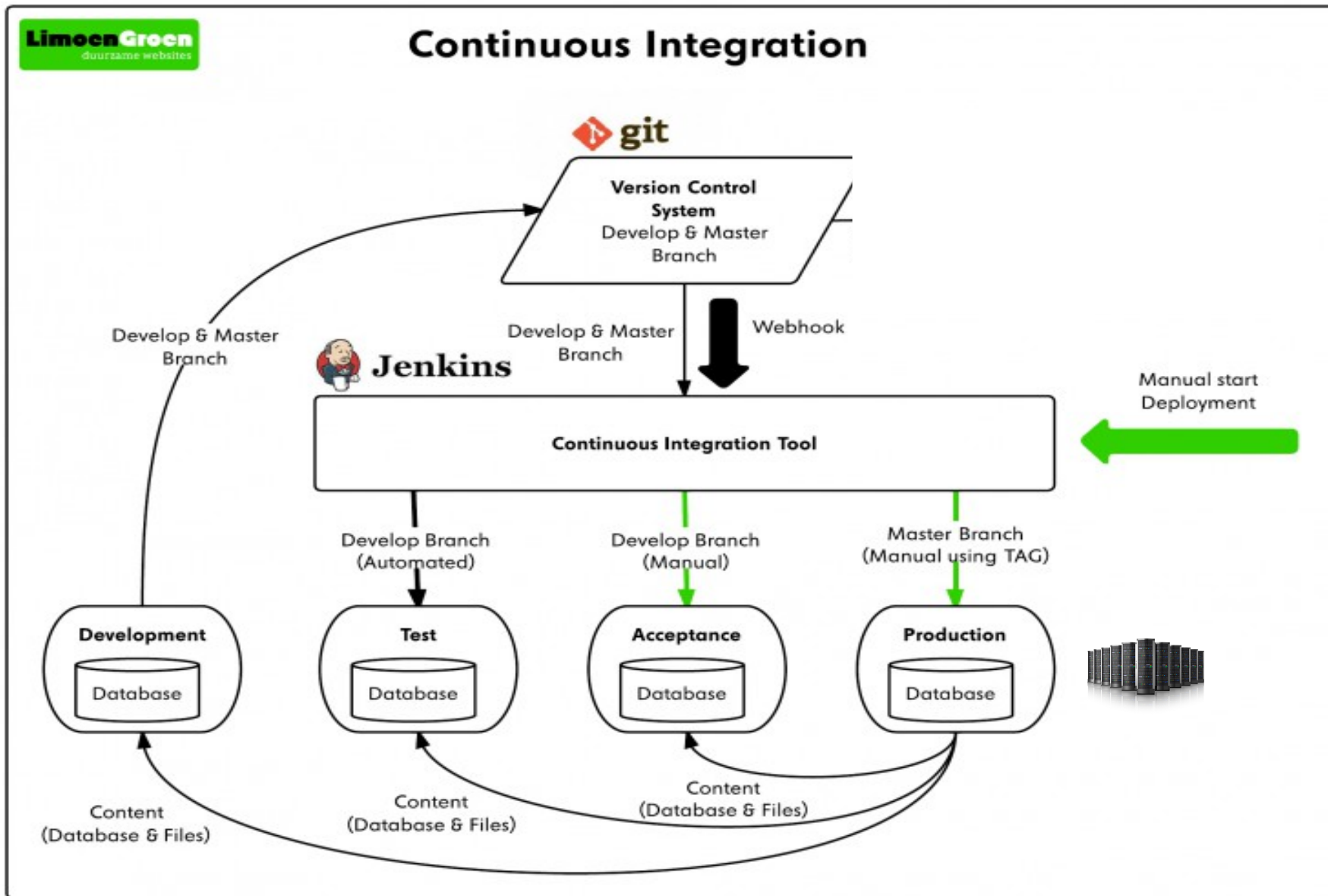
1. Code repository 

2. Manage and execute tasks 

3. Resources (DTAP) 

# Drupal and CI



Source: LimoenGroen.nl

# Short discussion

- Is CI of value to all Drupal projects?

- What are the minimal requirement to develop a high quality Drupal application?

- Where to place your configuration code?
  - Install profile
  - Feature
  - hook_update_N

Unit Test

Integration Testing

System Testing

Acceptance Testing

# DIY CI

- Code repository (bitbucket.org)

- Dev, Test and Production server (ssh)

- SimpleTest

- Drush site aliases

- Scripts & Git hooks

    *$ drush test-run*

    *$ drush sql-sync*

    *$ drush rsync*

```
*  For example:
*
*    # File: mysite.aliases.drushrc.php
*    $aliases['dev'] = array(
*      'root' => '/path/to/drupal',
*      'uri' => 'dev.mydrupalsite.com',
*    );
*    $aliases['live'] = array(
*      'root' => '/other/path/to/drupal',
*      'uri' => 'mydrupalsite.com',
*    );
*
*  Then the following special aliases are defined:
*
*    @mysite            An alias named after the grou
*                       may be used to reference all
*                       aliases in the group
*                       (e.g. drush @mydrupalsite sta
*
*    @mysite.dev        A copy of @dev
*
*    @mysite.live       A copy of @live
```

```
Actions executing in a potentially infinite loop 25 passes, 0 fails, 0 exceptions, and 5 debug messages    [ok]
No leftover tables to remove.                                                                              [status]
No temporary directories to remove.                                                                       [status]
Removed 1 test result.                                                                                     [status]
```

# Example
## Kanooh.be | Paddle distribution

- Drupal distribution for Flemish Government

- Maintain a potential 1000+ installations

- 2 weekly SCRUM sprints (JIRA)

- Issue branches

- Quality Assurance and User Acceptance

- Definition of done

- SimpleTest & Selenium testing

- Build- and testing bots (Jenkins & Amazon)

- Multi-threaded deployment platform (Gearman)