Product Management

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Outline

After automatic build (so far)

- Continuous Development working with branches in version control
- Continuous Integration

Continuous Development

Working with branches in version control

Problems

- A developer will do several commits before having a working product with a new feature
- → We should always keep the latest working version of the product somewhere
- Developers might work on different features and their work-inprogress commits will keep on conflicting with each other
- Developers should work on independent versions of the product until their feature is ready to be merged

Why using branches

- Keep the latest working version of the product on the master branch
- Develop each feature on its own dev branch (or feature branch) separated from the master
- Once a feature is ready, merge its dev branch into the master branch to create a new version of the working product

Branch

Create a branch

\$ git branch branch name

Switch to that branch

\$ git checkout branch_name

First push on a branch

\$ git push --set-upstream origin branch_name

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Merge a dev branch

Always merge the master into the dev branch first

- Step I: merge master into branch \$ git merge master
- Step 2: solve conflicts (if any) and push
- Step 3: merge branch into master (no conflict this time)
 - \$ git checkout master
 - \$ git merge development

Continuous Integration

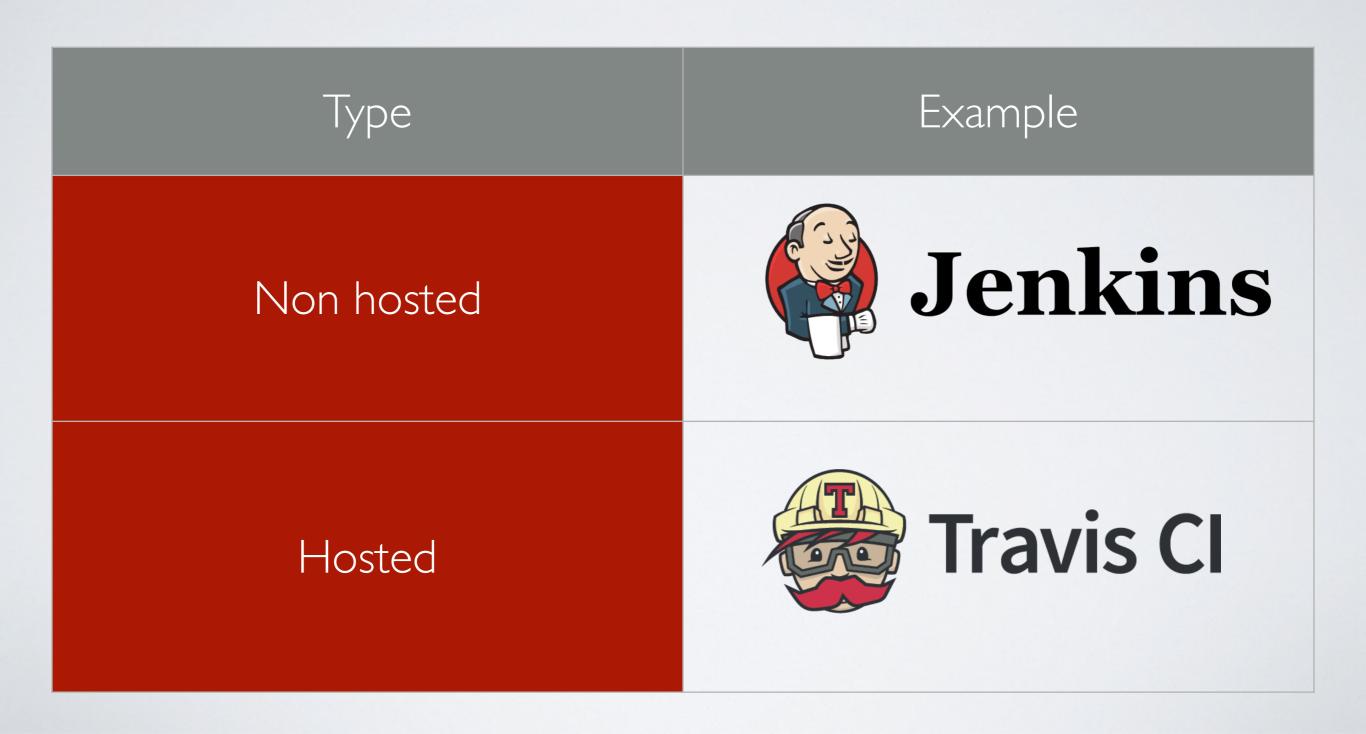
Problem

- · Developers implement, build and test each feature separately
- The product owner merges features (dev branches) into the working version of the product (master)
- Two features might interfere with each other and break the build and/or the tests when put together
- → The product owner must (re)build and the (re)test after each feature merge

Continuous Integration (CI)

Automatically pull, build and test the latest commit (usually from the master) on a non-developer machine

Existing CI tools



Going further

Continuous Delivery

Automatically validate that your product is ready to be release to customers (a.k.a production ready)

Continuous Deployment

Automatically release your product to customers (a.k.a migrate and deploy your product to production)

