Continuous Integration
Continuous Deployment

git + GitHub

git

Version control system (VCS)

git

Version control system (VCS)

Facilitates collaboration

git

Version control system (VCS)

Facilitates collaboration

Keep track of versions

git

Version control system (VCS)

Facilitates collaboration

Keep track of versions

Switch between versions

git

Version control system (VCS)

Facilitates collaboration

Keep track of versions

Switch between versions

Work with branches

GitHub

Hosting service

GitHub

Hosting service

Nice web interface to git

GitHub

Hosting service

Nice web interface to git

And more ...

Collaboration

Collaboration

master

Collaboration

master

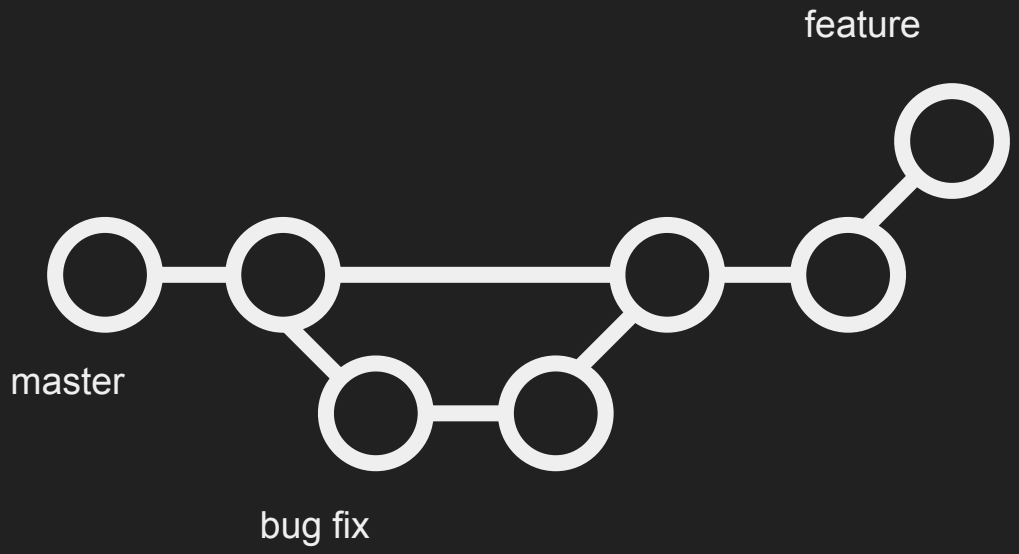
Collaboration

Collaboration

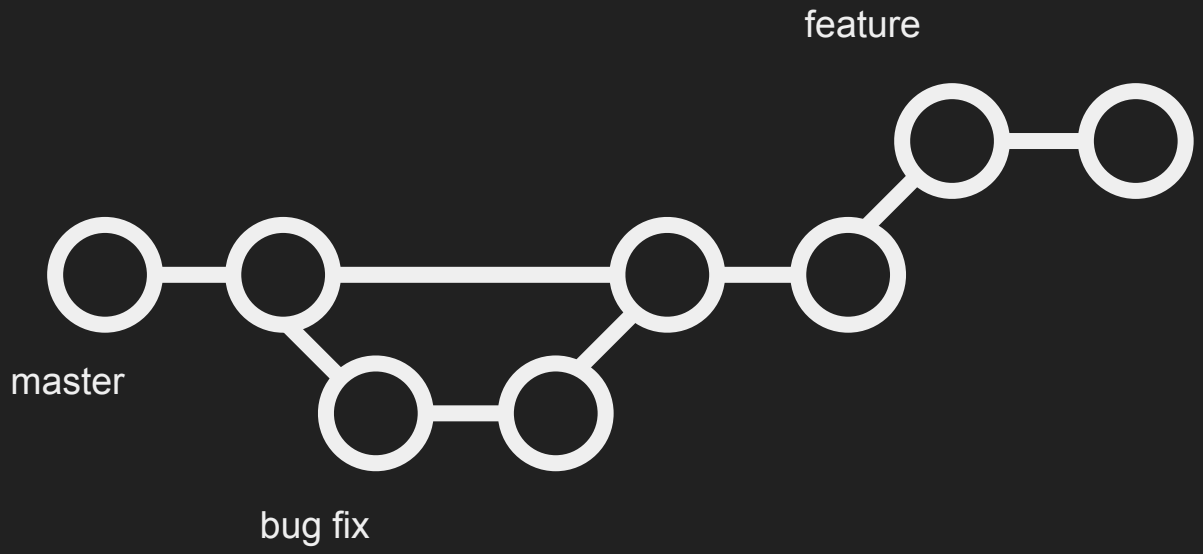
Collaboration

Collaboration

Collaboration



Collaboration



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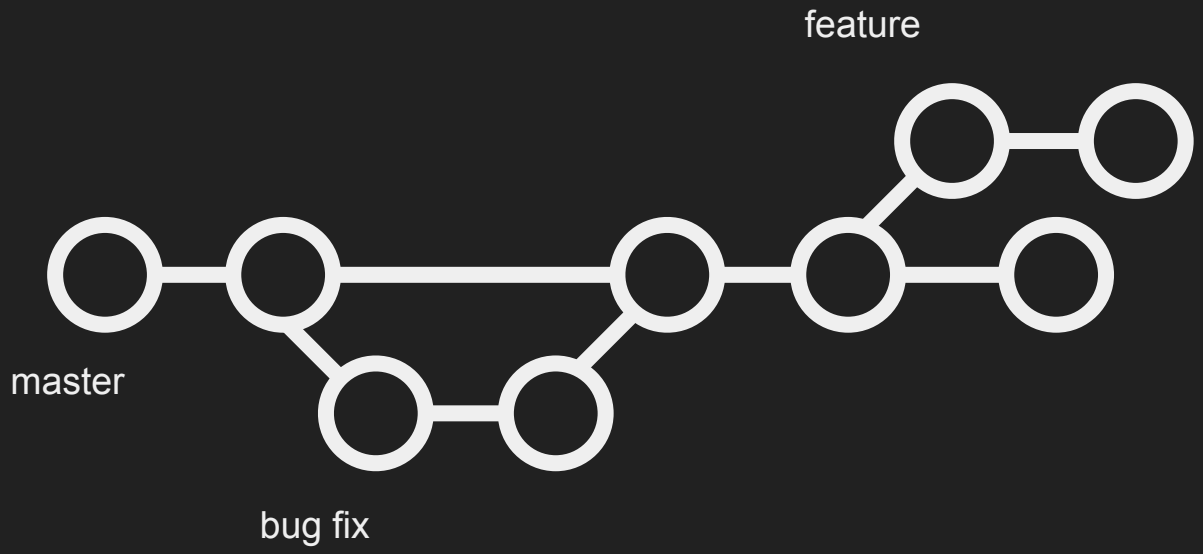
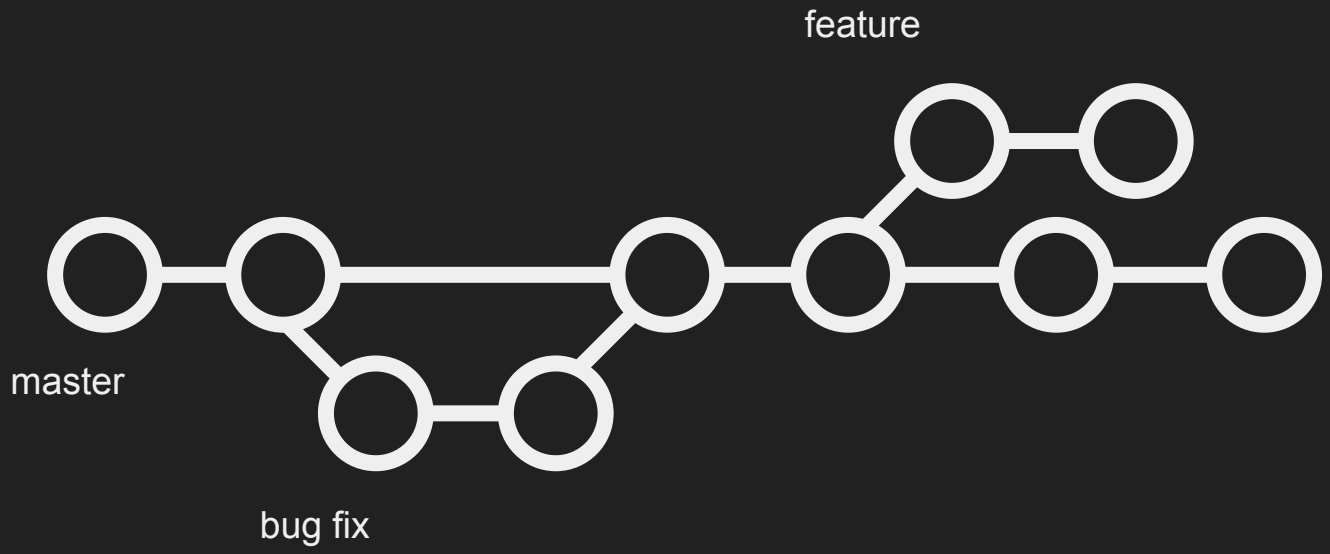
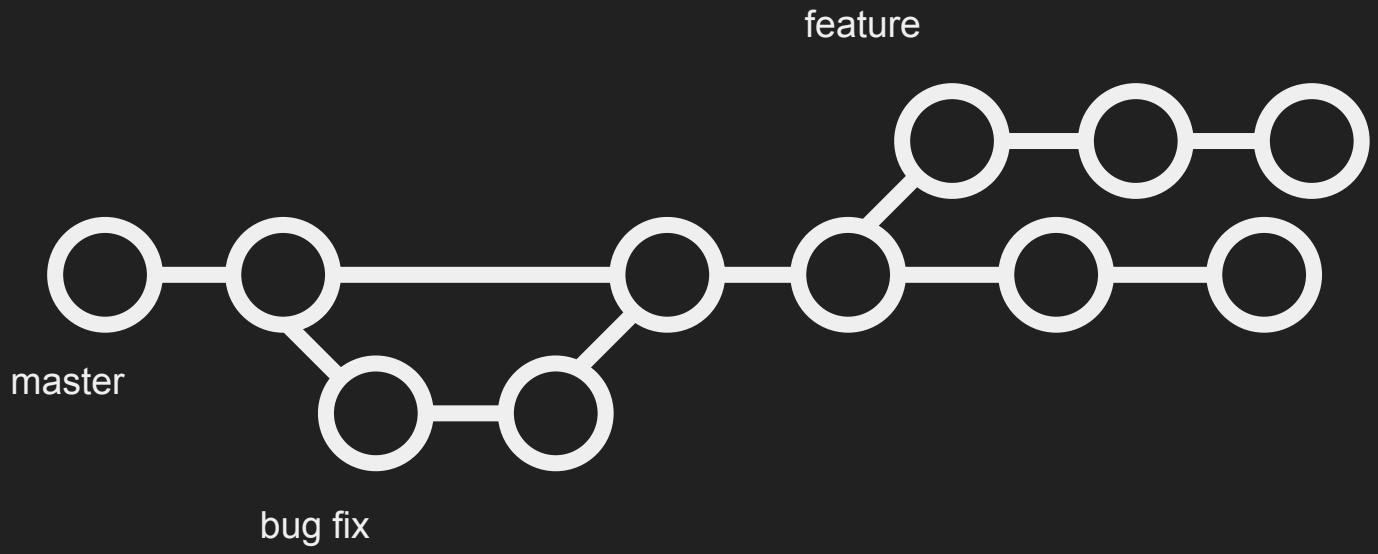


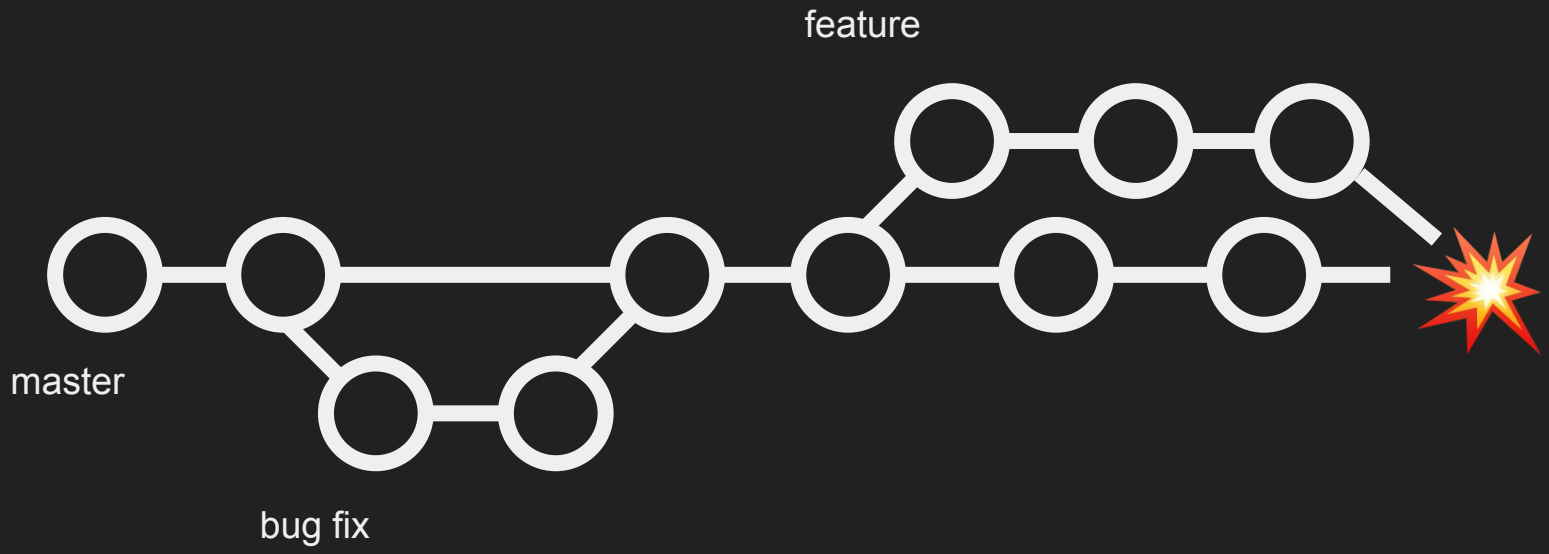
Collaboration



Collaboration



Integration challenges



Continuous Integration

Continuous Integration (CI)

Integrate changes safely

Continuous Integration (CI)

Integrate changes safely

Add automated tests

Continuous Integration (CI)

Integrate changes safely

Add automated tests

Catch, and fix bugs early

Workflow

CI Services

Travis CI

CODESHIP

Jenkins

Servers

Install software (e.g., dependencies)

Servers

Install software (e.g., dependencies)

Build, run, and test our applications

Servers

Install software (e.g., dependencies)

Build, run, and test our applications

Customize build

GitHub

WebHooks

WebHooks

Similar to event listeners

WebHooks

Similar to event listeners

Triggered when some event happens

WebHooks

Similar to event listeners

Triggered when some event happens (e.g., pushing commits)

Travis CI

Travis CI

Sign up for Travis CI account

Travis CI

Sign up for Travis CI account

Give Travis CI access to our GitHub repositories

Travis CI

Sign up for Travis CI account

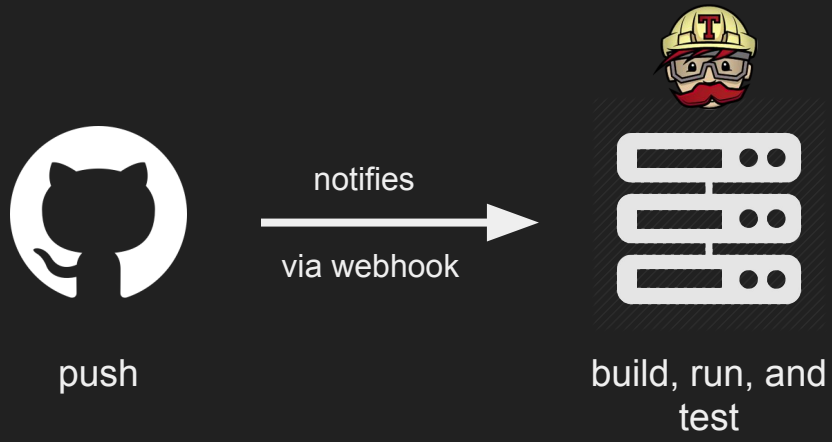
Give Travis CI access to our GitHub repositories

Automatically configures repositories

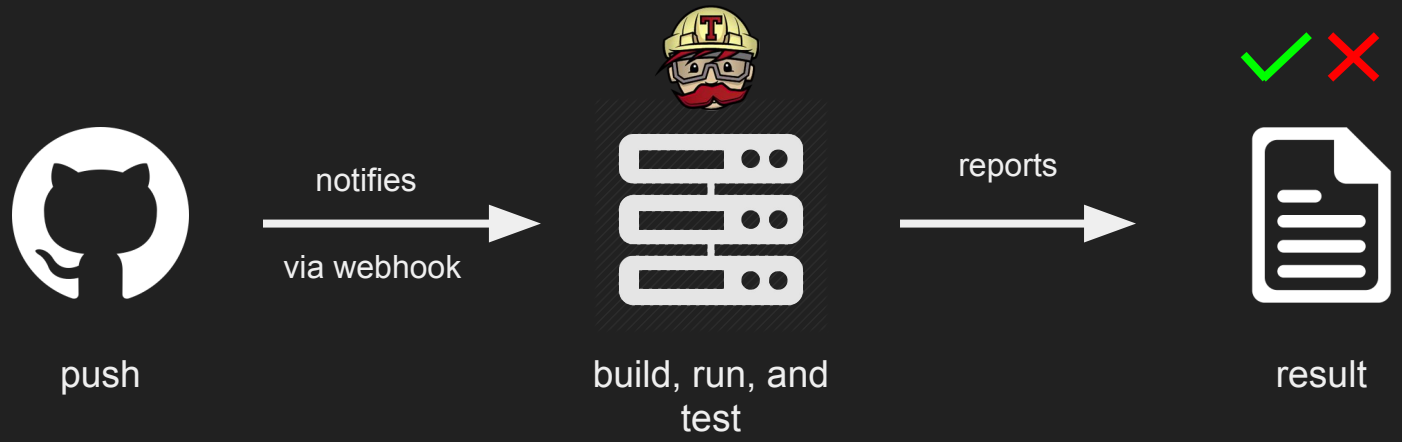
Workflow

push

Workflow

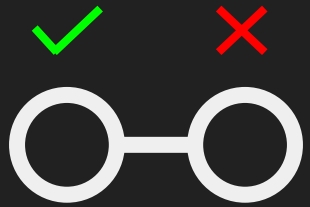


Workflow


notifies
via webhook
reports
push
build, run, and test
result

Build and test every commit

Build and test every commit



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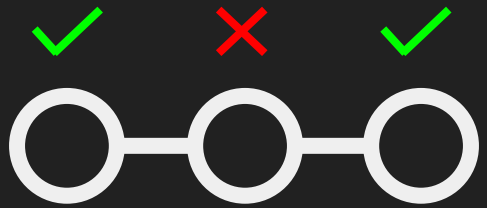

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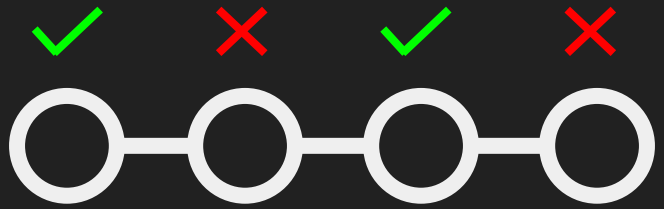

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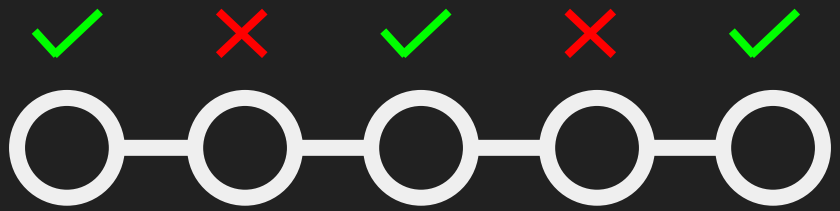

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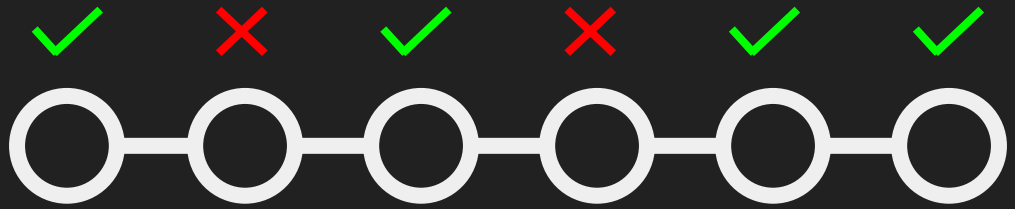

Build Configuration

Build Configuration

Via web UI or file in GitHub repo (usually root)

Build Configuration

Via web UI or file in GitHub repo (usually root)

Different between services

Build Configuration

Via web UI or file in GitHub repo (usually root)

Different between services

Define build, and testing environment

Travis CI

.travis.yml

```
language: python
python:
- 2.7
- 3.4
install: pip install -r requirements.txt
script: ./run-tests
```

Continuous Deployment

Continuous Deployment (CD)

Used in conjunction with CI

Continuous Deployment (CD)

Used in conjunction with CI

Release updates (e.g., fixes, and features) with more confidence

Deployment Integrations

Travis CI

Deployment

Supported Providers

Continuous Deployment to the following providers is supported:

- ANYNINES
- APPFOG
- ATLAS
- AWS CODEDEPLOY
- AWS ELASTIC BEANSTALK
- AWS LAMBDA
- AWS OPSWORKS
- AWS S3
- AZURE WEB APPS
- BINTRAY
- BITBALLOON
- BLUEMIX CLOUDFOUNDRY
- BOXFUSE
- CATALYZE
- CHEF SUPERMARKET
- CLOUD 66
- CLOUDFOUNDRY
- DEIS
- ENGINE YARD
- GITHUB PAGES
- GITHUB RELEASES
- GOOGLE APP ENGINE
- GOOGLE CLOUD STORAGE
- GOOGLE FIREBASE
- HACKAGE
- HEROKU
- LAUNCHPAD
- MODULUS
- NPM
- OPENSHIFT
- PACKAGECLOUD.IO
- PUPPET FORGE
- PYPI
- RACKSPACE CLOUD FILES
- RUBYGEMS
- SCALINGO
- SCRIPT
- SURGE.SH
- TESTFAIRY

Deployment

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- TESTFAIRY

Thank you!

Slides:
https://goo.gl/U5Rfut

cs50.ly/feedback