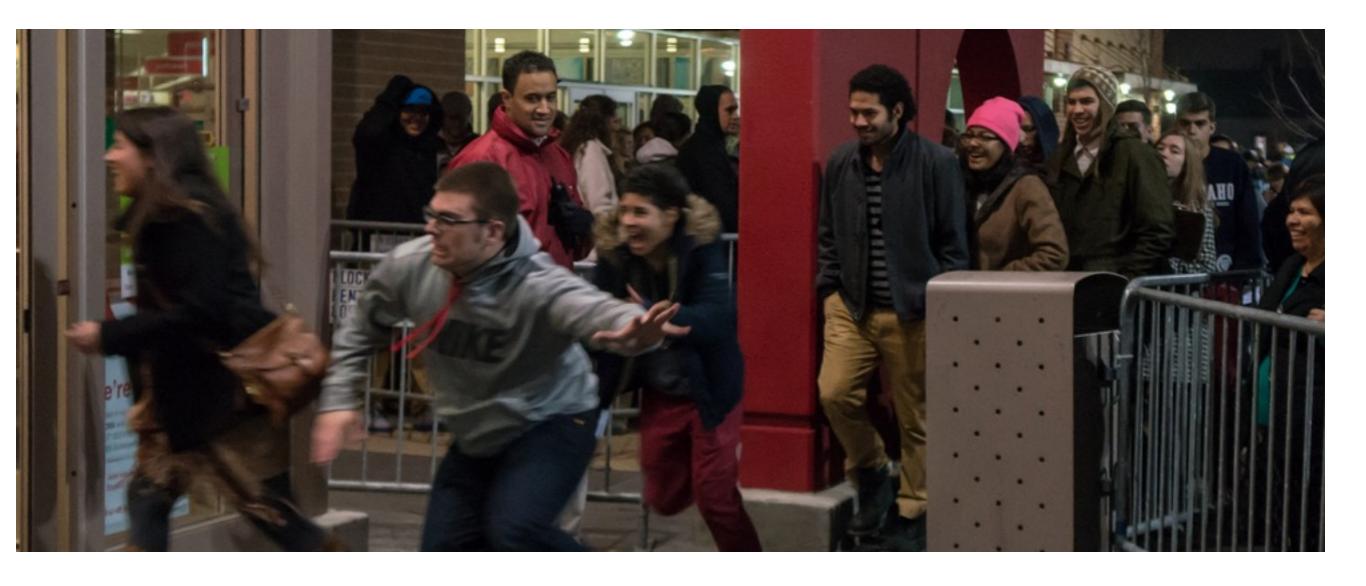
Open **Source** VS.

Open Collaborations

Lars Holm Nielsen, IT-CIS-DLT Based on talk by Arfon Smith (GitHub) with his permission.

Just open sourced your project?

Imagined this?



But, experiencing this...



Open source vs. Open collaboration

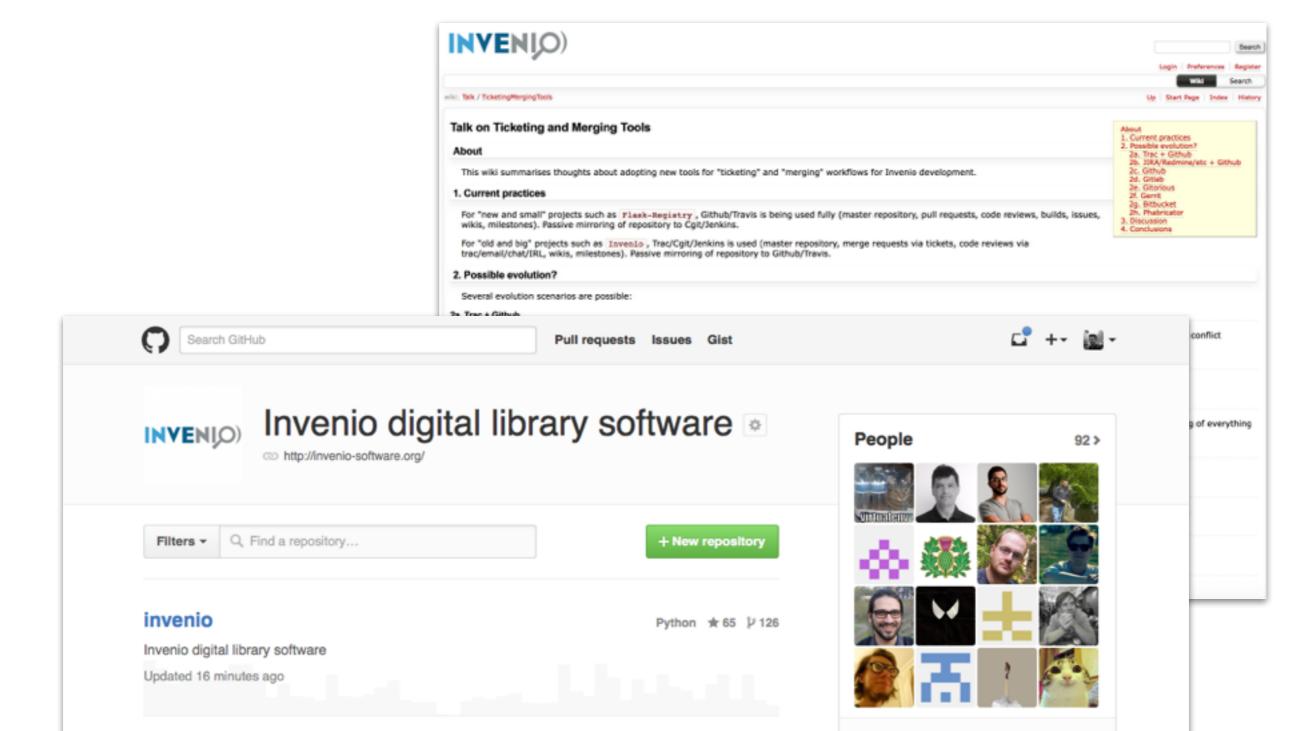
Open source is the right to **modify.**

Open source is the right to **modify,** not the right to **contribute**.

Open Collaborations: The "open source" way of working...

Better at collaborating because they have to be

Invenio 1+ year ago



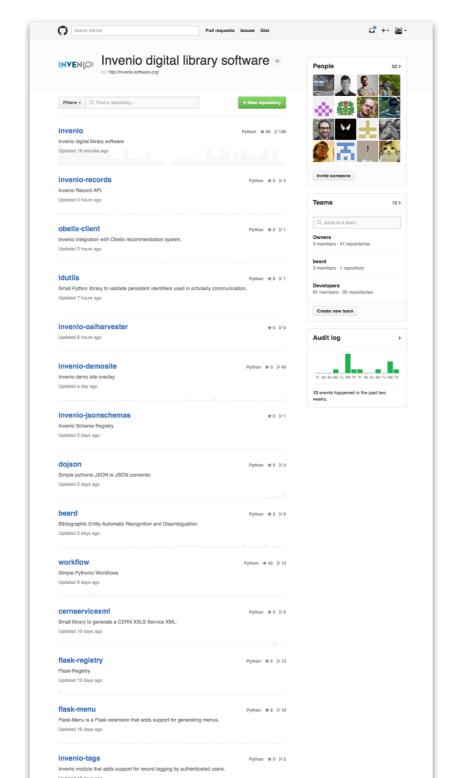
Developers are **not all interested** in digital libraries ...

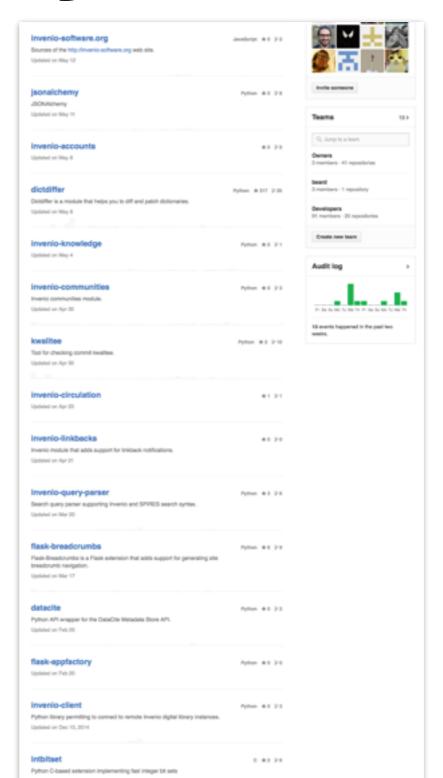
Step 1: Split project





Invenio today





Step 2: Reduce friction

What is it like to be a new contributor?

Docs > Installation O Edit on Git Hub

Installation

1. About

This document specifies how to install a development version of Zenodo for the first time. Production grade deployment is not covered here.

2. Prerequisites

First follow the section "2. Prerequisites" in First Steps with Invenio.

2.2 OS X prerequisites

For OS X it is recommended to install dependencies via Homebrew. First install Homebrew and make sure you have the XCode command-line tools (note you may need to install XCode via AppStore if you did not already do sol:

 $i: roby \to `$(corl -fids. \ bttps://row.github.corcortext.cor/install/water/install)`$ f reade-select -- (retail)

Next install dependencies via Homebrew:

```
S brow install python redix mysql liberl2 libralt nodeja git rabbitmq
S ope install -g lossjt.9.5 clear-cus requireja uglify-ja baser
5 plp install virtualess virtualess srapper
```

2.3 MySQL configuration

The default MySQL configuration needs to be modified otherwise the database loading will fail. Please add the following lines to sylvar (located in /vtc/sylvar or /var/tocal/vtc/sylvar):

```
max allowed packet-15
open_filles_linch=8896
```

Additionally on Q5 X developer machines you will need to limit number of open files (defaults to 256 per process in OSXX:

```
[mymqld]
table open caches/58
```

Alternatively, you can also increase number of allowed files per process using:

```
5 Improbabl limit marriles 05536
```

See http://stackoverflow.com/a/22773887 and http://docs.basho.com/rials/fatest/ops/fs.ning/openfiles-limit/IfMac-OS-X for how to persist the change.

3. Quick start

3.1. Getting the source code

First go to GitHub and fork both Invenio and Zenodo repositories if you have not already done so (see Step 1 in Fork a Repol:

- Imegaio
- Zenodo

Next, clone your forks to get development versions of Invento and Zenodo.

```
S git close https://github.com/susernames/invento.git
5 git clore https://github.com/cusernames/semode.git
```

Make sure you configure upstream remote for the repository so you can fetch updates to the repository.

```
5 of Sept. Over Counts.
5 git renote add upstream https://github.com/inventosoftware/invento.git
5 glit firtch upstress
5 git results add zonado https://github.com/zenado/invenio.git
5 gift fetch sensits
5 of $4090/src/sensits
```

We recommend to work using virtual environments so packages are installed in an isolated environment. (seese)\$ tells that your zerodo environment is the active one.

```
5 sivirtualony penodo
(senda)$ I we are in the zerodo environment now and
Cosmodals F can leave it using the deactivate command.
(senoda) fi deactivate
$ 8 New John it back, recreating it would find.
(semada)$ # That's old there is to know about it.
```

Let's create a working copy of the Invenio and Zenodo source code in the just created environment.

```
[semode]5 obcirtualen
(senote) 6 git-new-worldir $40%/sec/invento/ invento pu-senota
(senole)5 git-new-workdir $409E/urc/senole/ senole marter
```

By default we checkout the development branches system for Zenodo and paraeres for Invenio (see Branches for other possibilities).

3.3 Installation

The steps for installing Zenodo are nearly identical to a normal Invenio installation:

```
(senoda)5 odriffuečeny arc/senoda
(sensiti) for testall or requirements, but conducts action to
```

The option --extres across in for less sensell is needed to ensure that the Invenio source code we just cloned will not be overwritten. If you omit it, you will be prompted about which action to

For development environments you should install our git commit hooks that checks code according to-our code quality standards:

```
(senote)5 of $400/sec/Leventa,
(senodo)5 kwalitee githeeks install
Cornoln's builder githesis install
```

3.4. Configuration

Generate the secret key for your installation.

```
(senada)6 Inventorunage config create secret-key
```

If you are planning to develop locally in multiple environments please run the following commands.

```
(remode)$ inventoranage config set CPQ_BRGI_BACKEND flask.ext.exail.backends.console.Facil
(serods)5 inventionange config set CFG RESCHED PROCESS LISTR SUSER
```

By default the database name and username is set to serves. You may want to change that especially if you have multiple local installations:

```
Cramodal'S inventionanage conflig set CPS SATAMSE NAME character
(senote)$ inventorunage config set CFS_EASTAINSE_LSCR cusername
```

3.5. Assets

Assets in non-development mode may be combined and minified using various filters. We need to set the path to the binaries if they are not in the environment gavnv aiready.

```
5 sudo ngm install -g less@i.7.5 clman-css requirejs uglify-js bower
# Local installation
(Invento)S Inventommange config out USSLESS "find $PAD/rode_mobiles -iname tess( | head -1" (Invento)S Inventommange config out OLEANSSLESS "find $PAD/rode_mobiles -iname cleances | head -5"
(investigld investigating config out HEQUINIS BON "Find Shifthade modules -invest r.js. | head -1"
(investigld investigatings config out HELEPISS BON "Find Shifthade modules -invest uplifyis | head -1"
```

Install the external JavaScript and CSS libraries:

```
(senda)5 obcirtualiene anc/senda
(sends)5 Investorange bover > bover.just
[senote)5 hower install.
```

```
(seroda)S Inventorurage config set COLLECT_STORMES Invento.out.collect.storage.link
Position agencyolevni Bisborou)
```

3.6. Initial data

Once you have everything installed you can create the database and populate it with initial data.

```
(Invented Inventorange database Init --userveset --password-$950_5001 --pes-1-know
(invenio)6 invenionanage dutabase create
```

3.7. Background queues (FIXME)

Now you should be able to run the development server. Invento uses Colory and Rectis which must be running alongside with the web server.

```
$ if make surve that media is manufa
5 sub service redis-server status
$ if or store it with store
5 subs service reals-start start
$ 4 hand orless
5 worken perodo
(senote)5 celeryd -C -A Invente.celery.celery --workstrefythttas_Dar
5 F Lauret Milested
Cremobil'S bilesched start
$ # in a new terrelinal
Casnada'd Inventionunge runsarve
 * Restarting with reloader
```

Troubleshooting: As a developer, you may want to use the provided invertile, with hondro. It starts all the services at once with nice colors. Be default, it also runs flower which offers a web interface to monitor the Celery tasks.

```
Cornell'S ate testall Cover
```

When you have the servers running, it is possible to upload the demo records.

```
$ 2 in a new terrelood
(senote)$ obvirtualienv snc/senote
(senodo)5 inveniominage demosite populate --packages-penodo.demosite \
          -f zerodu/testsulite/demo_remodu_record_more_data.anl \,
```

And you may now open your favourite web browser on http://00.0004000/

4.4 Fetching pull requests

```
5 of Sept. (sec/Sept. fac.)
5 vin .git/config.
```

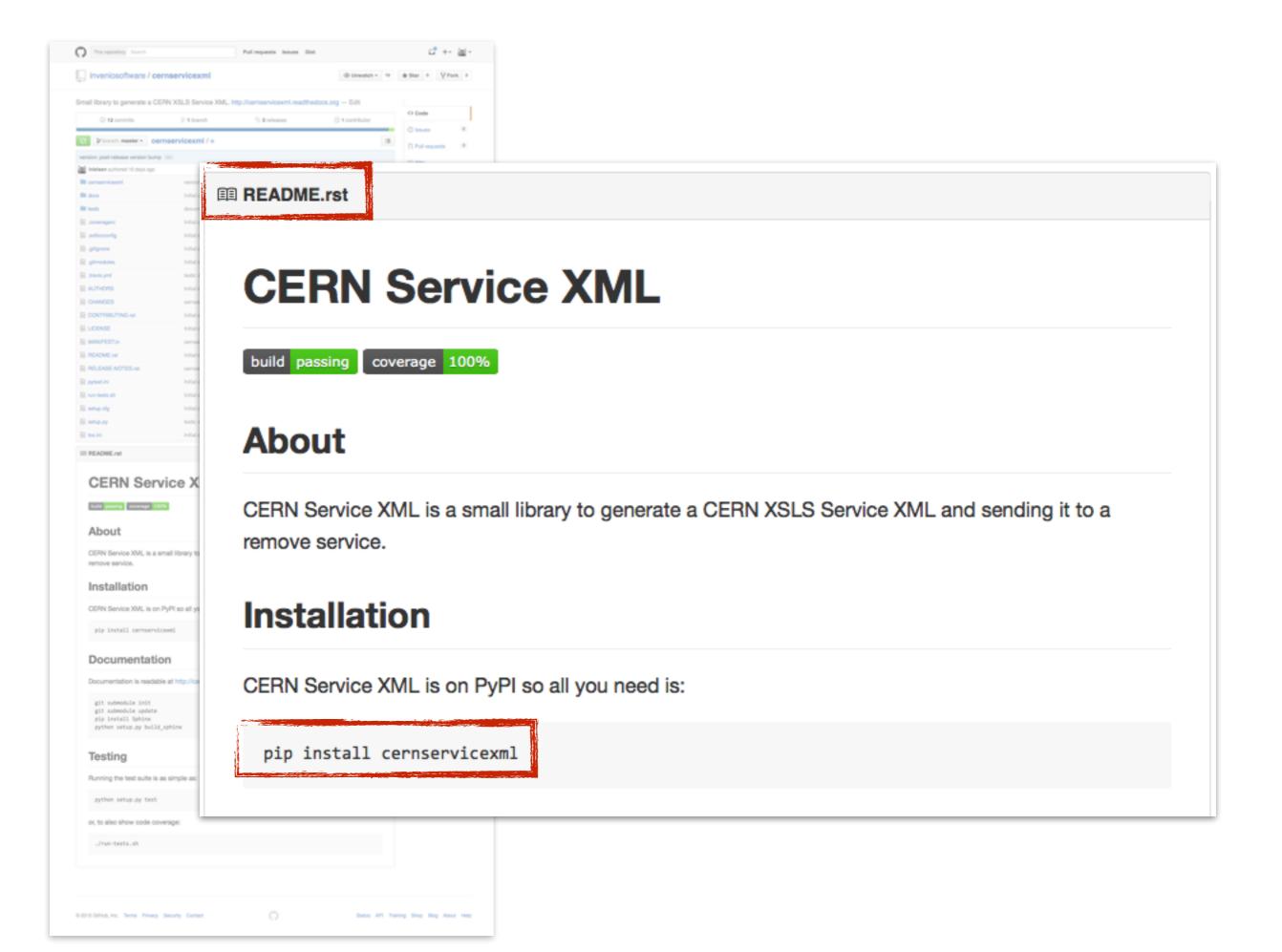
Add Fetch - enefs/pull/*/head:refs/renotes/apstream/pr/* to the remote upstream

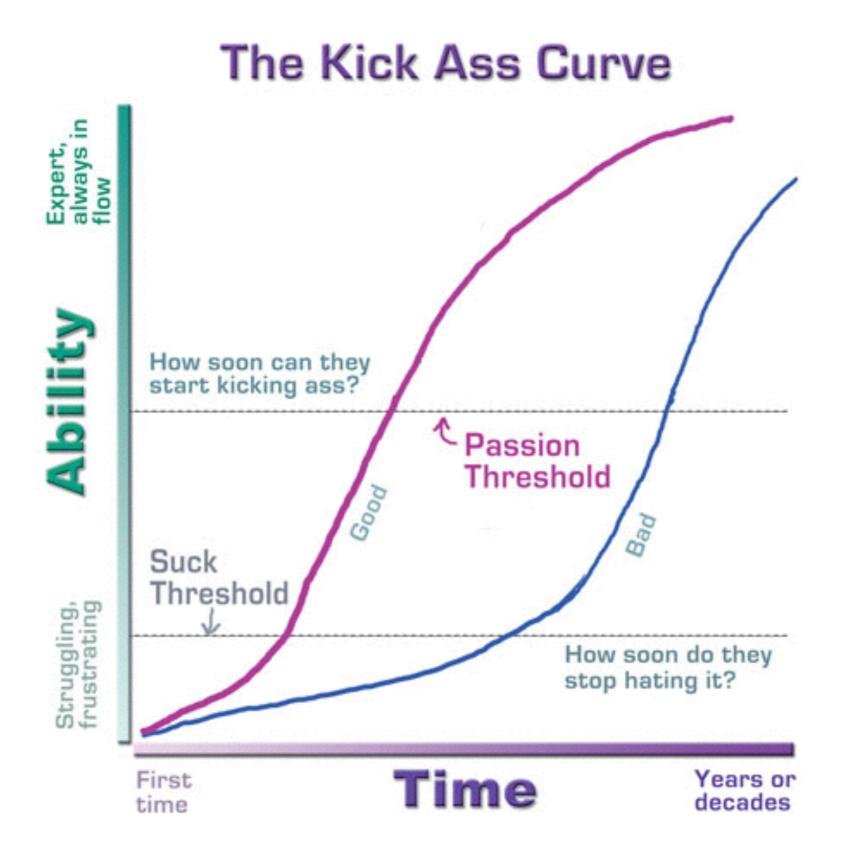
```
[remote "spetreum"]
    | = glk://glknub.com/inventosoftware/invento.glk
    firtish a unefs/heads/*:refs/resotes/upstream/
    fields = meds/publ/*/head.refs/remotes/apstream/gr/*
5 of SKPE/sec/secolal
5 vin .git/config
```

Add retri = +refs/pull/*/head:refs/renotes/upstreas/pr/* to the remote pends .

```
[remote "perodo"]
    and a https://glthub.com/consis/comods.glt
    fatch = wrefs/heads/*:refs/resotes/spotreen/*
fetch = wrefs/publ/*/head.refs/resotes/spotrees/pr/*
O Previous
                                                                                                                      Next O
```

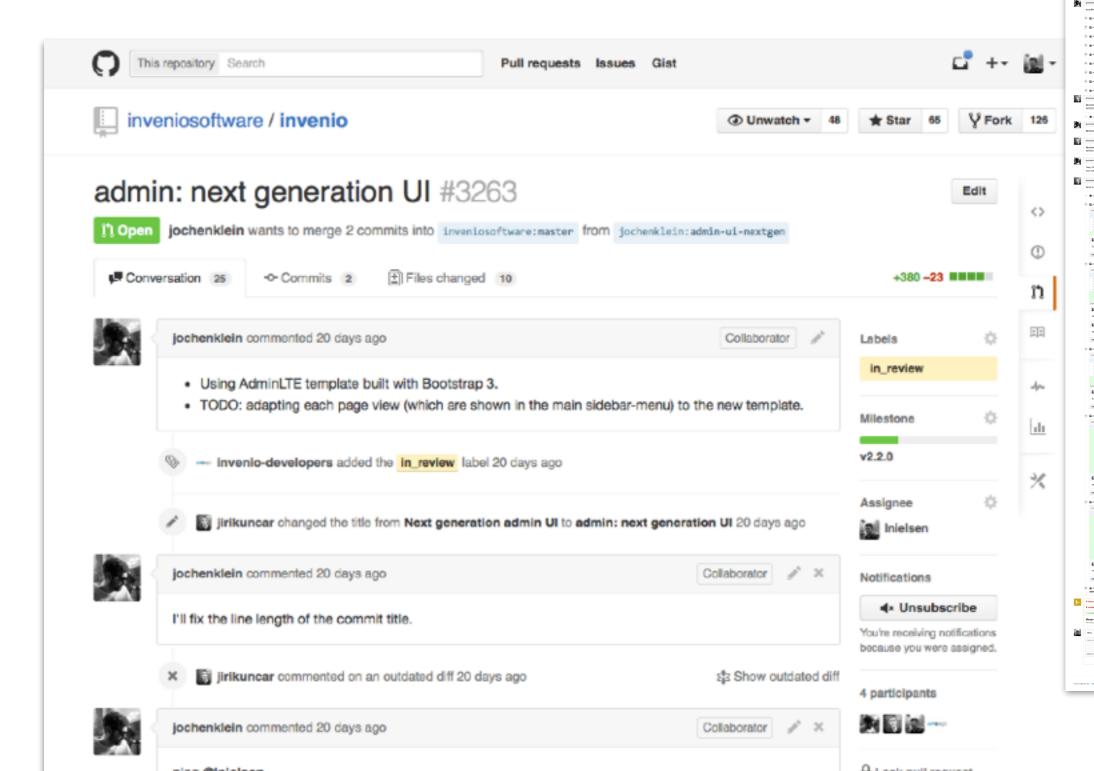
@ Copyright 2015, CERN. Built with Sphinx using a theme provided by Read the Docs.





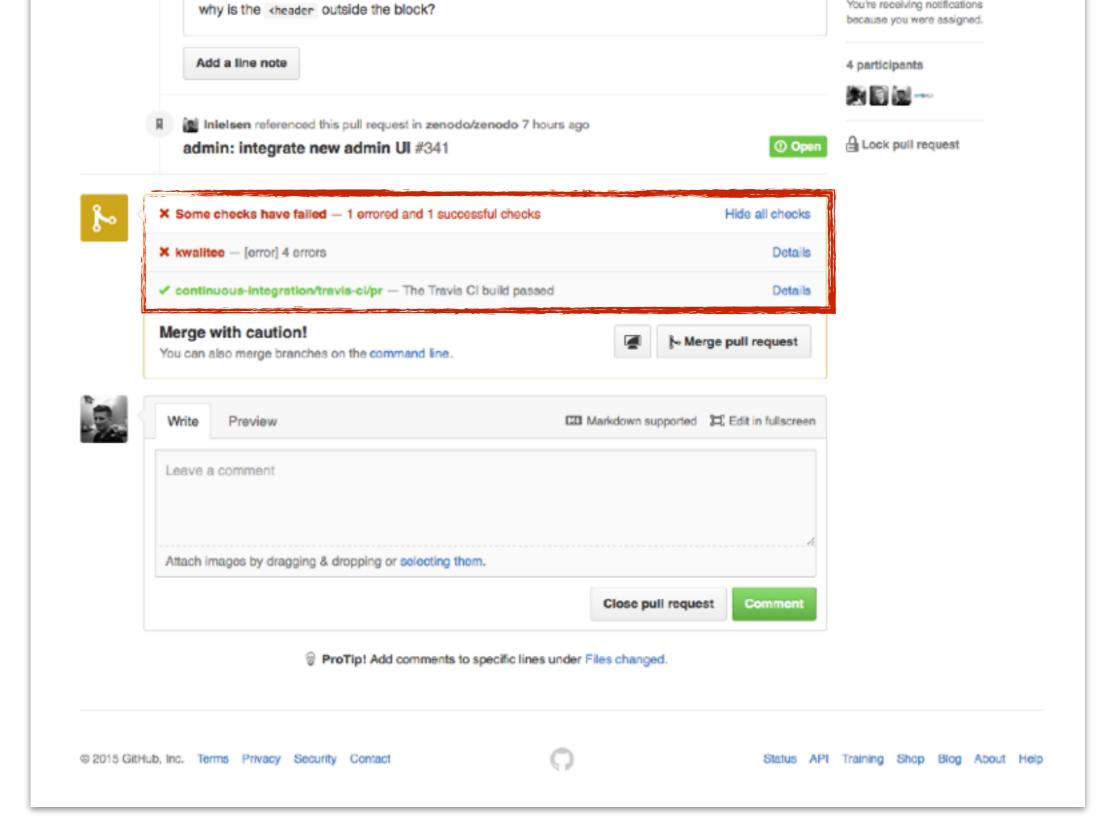
Step 3: Asynchronous, electronic, **exposed** collaborative process

The pull request



Code first, Permissions later





GitHub is the **facilitator** for Invenio's open collaboration

Three things we should all do on our projects...

1. LICENSE

2. README

3. Bootstrap script

Thanks

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