

INVENIO RDM



Turn-key Research Data Management repository

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What's the purpose?

- Environments
- Up and running instance
- Plugins and Extensions
- Collaboration guidelines
- Working groups
- Code!



How do you work?

Containers?

Pipx?
Pipenv?

Virtual envs?

OS?

Warm up!

<https://github.com/ppanero/invenio-rdm-extension-demo/wiki>

Environment

- Hey this is **biased**!
- Create a virtual env (e.g. with [virtualenvwrapper](#))
 - Activate it
- Unset *PIPENV_IGNORE_VIRTUALENVS*
- Install `invenio-cli` there

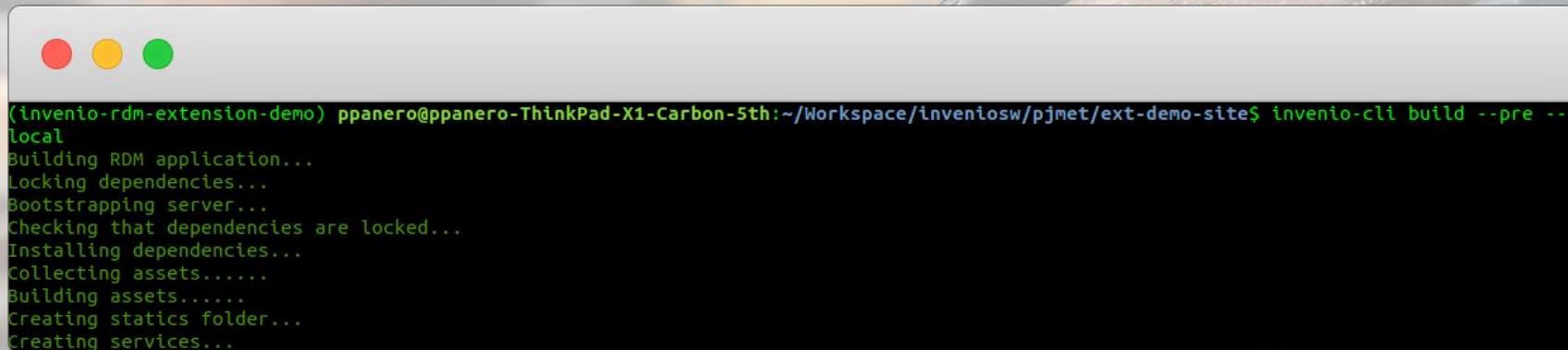
Development!

- Initialize FS

```
(invenio-rdm-extension-demo) ppanero@ppanero-ThinkPad-X1-Carbon-5th:~/Workspace/inveniosw/pjmet$ invenio-ctl init --flavour=RDM
Initializing RDM application...
You've downloaded /home/ppanero/.cookiecutters/cookiecutter-invenio-rdm before. Is it okay to delete and re-download it? [yes]:
project_name [My Site]: Ext Demo Site
project_shortname [ext-demo-site]:
project_site [ext-demo-site.com]:
github_repo [ext-demo-site/ext-demo-site]:
description [Invenio RDM Ext Demo Site Instance]:
author_name [CERN]:
author_email [info@ext-demo-site.com]:
year [2020]:
Select database:
1 - postgresql
2 - mysql
3 - sqlite
Choose from 1, 2, 3 [1]:
Select elasticsearch:
1 - 7
2 - 6
Choose from 1, 2 [1]:
-----
Generating SSL certificate and private key for testing....
Can't load /home/ppanero/.rnd into RNG
140211886014912:error:2406F079:random number generator:RAND_load_file:Cannot open file:../crypto/rand/randfile.c:88:Filename=/home/ppanero/.rnd
Generating a RSA private key
.....++++
.....++++
writing new private key to 'docker/nginx/test.key'
-----
Creating logs directory...
```


Development!

- Install (build)



```
(invenio-rdm-extension-demo) ppanero@ppanero-ThinkPad-X1-Carbon-5th:~/Workspace/inveniosw/pjmet/ext-demo-site$ invenio-cli build --pre --local
Building RDM application...
Locking dependencies...
Bootstrapping server...
Checking that dependencies are locked...
Installing dependencies...
Collecting assets.....
Building assets.....
Creating statics folder...
Creating services...
```

Development!

- Install (assets) ← Known issue, it should happen with “*build*”

```
(assets_cmd) ppanero@ppanero-ThinkPad-X1-Carbon-5th:~/Workspace/Inveniosw/test/assets-test$ invenio-cli build --skip-lock --pre --local
building RDM application...
bootstrapping server...
checking that dependencies are locked...
installing dependencies...
collecting assets.....
Building assets.....
npm WARN deprecated browserslist@1.7.7: Browserslist 2 could fail on reading Browserslist >3.0 config used in other tools.
npm WARN deprecated ckeditor@4.12.1: We have renamed the @ckeditor package. New versions are available under the @ckeditor4 name.
npm WARN deprecated jvectormap@1.2.2: jvectormap is not maintained since Aug 2015. You can use jvectormap-next or jqvnap instead.

> node-sass@4.13.1 install /home/ppanero/.virtualenvs/assets_cmd/var/instance/assets/node_modules/node-sass
> node scripts/install.js

Cached binary found at /home/ppanero/.npm/node-sass/4.13.1/linux-x64-72_binding.node

> core-js@2.6.11 postinstall /home/ppanero/.virtualenvs/assets_cmd/var/instance/assets/node_modules/core-js
> node -e "try(require('./postinstall'))catch(e){}"

Thank you for using core-js ( https://github.com/zloirock/core-js ) for polyfilling JavaScript standard library!

The project needs your help! Please consider supporting of core-js on Open Collective or Patreon:
> https://opencollective.com/core-js
> https://www.patreon.com/zloirock

Also, the author of core-js ( https://github.com/zloirock ) is looking for a good job -)

> core-js-pure@3.6.4 postinstall /home/ppanero/.virtualenvs/assets_cmd/var/instance/assets/node_modules/core-js-pure
> node -e "try(require('./postinstall'))catch(e){}"

> ejs@2.7.4 postinstall /home/ppanero/.virtualenvs/assets_cmd/var/instance/assets/node_modules/ejs
> node ./postinstall.js

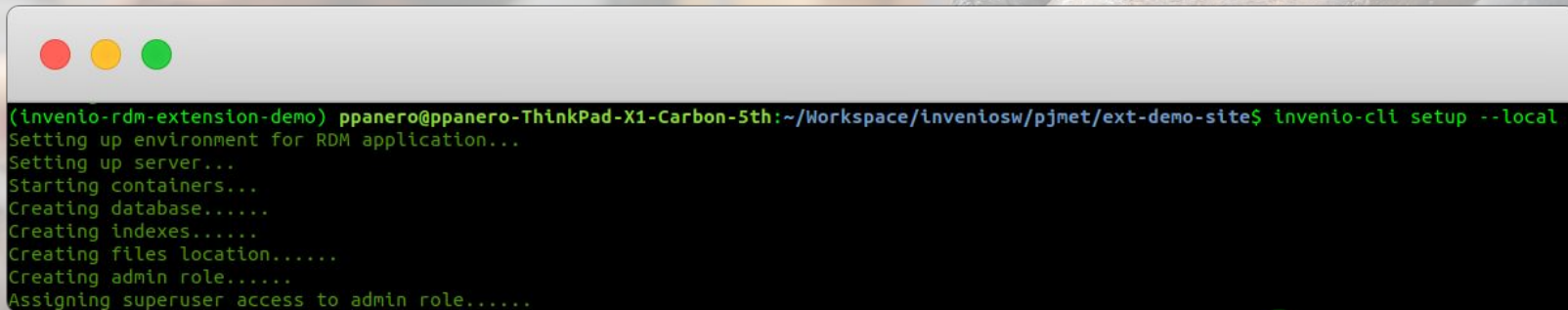
Thank you for installing EJS: built with the Jake JavaScript build tool (https://jakejs.com/)

> node-sass@4.13.1 postinstall /home/ppanero/.virtualenvs/assets_cmd/var/instance/assets/node_modules/node-sass
> node scripts/build.js

Binary found at /home/ppanero/.virtualenvs/assets_cmd/var/instance/assets/node_modules/node-sass/vendor/linux-x64-72/binding.node
Testing binary
Binary is fine
```


Development!

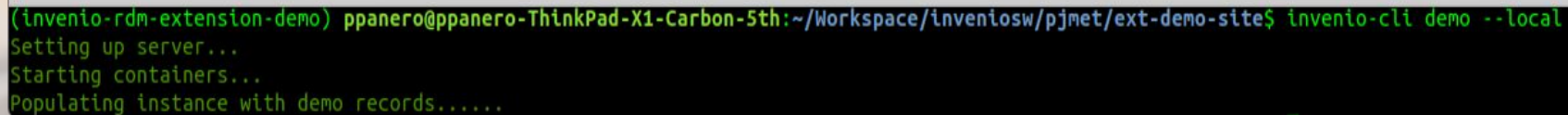
- Services (setup)



```
(invenio-rdm-extension-demo) ppanero@ppanero-ThinkPad-X1-Carbon-5th:~/Workspace/inveniosw/pjmet/ext-demo-site$ invenio-cli setup --local
Setting up environment for RDM application...
Setting up server...
Starting containers...
Creating database.....
Creating indexes.....
Creating files location.....
Creating admin role.....
Assigning superuser access to admin role.....
```

Development!

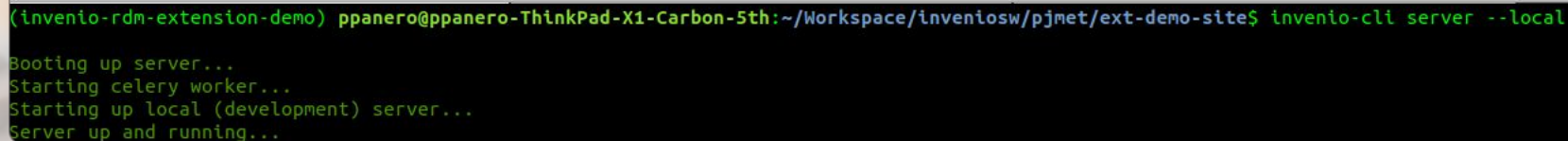
- Add demo data (demo)



```
(invenio-rdm-extension-demo) ppanero@ppanero-ThinkPad-X1-Carbon-5th:~/Workspace/inveniosw/pjmet/ext-demo-site$ invenio-cli demo --local
Setting up server...
Starting containers...
Populating instance with demo records.....
```

Development!

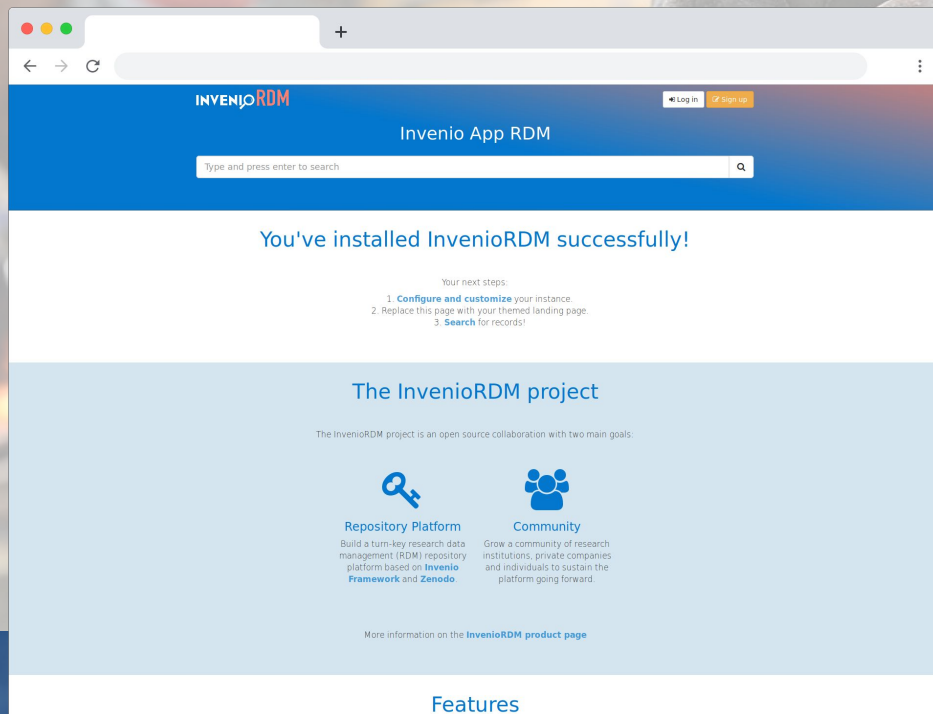
- Run it!



```
(invenio-rdm-extension-demo) ppanero@ppanero-ThinkPad-X1-Carbon-5th:~/Workspace/inveniosw/pjmet/ext-demo-site$ invenio-cli server --local
Booting up server...
Starting celery worker...
Starting up local (development) server...
Server up and running...
```


Development!

- Browse it!

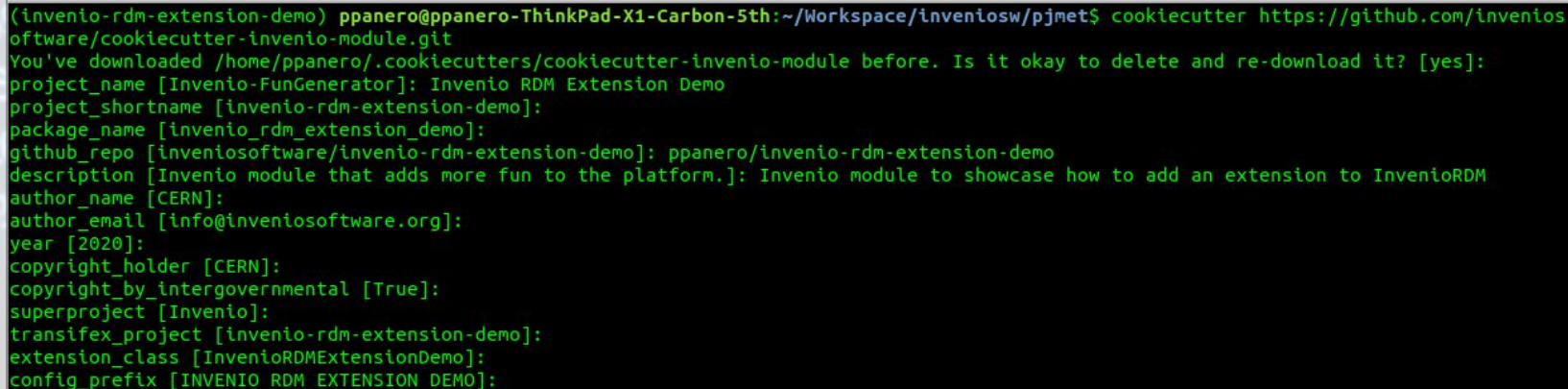


Extensions HowTo

- Create a new module
- Cookiecutter? [[GitHub](#)]

Extensions HowTo

- Create your extension



```
(invenio-rdm-extension-demo) ppanero@ppanero-ThinkPad-X1-Carbon-5th:~/Workspace/inveniosw/pjmet$ cookiecutter https://github.com/inveniosoftware/cookiecutter-invenio-module.git
You've downloaded /home/ppanero/.cookiecutters/cookiecutter-invenio-module before. Is it okay to delete and re-download it? [yes]:
project_name [Invenio-FunGenerator]: Invenio RDM Extension Demo
project_shortname [invenio-rdm-extension-demo]:
package_name [invenio_rdm_extension_demo]:
github_repo [inveniosoftware/invenio-rdm-extension-demo]: ppanero/invenio-rdm-extension-demo
description [Invenio module that adds more fun to the platform.]: Invenio module to showcase how to add an extension to InvenioRDM
author_name [CERN]:
author_email [info@inveniosoftware.org]:
year [2020]:
copyright_holder [CERN]:
copyright_by_intergovernmental [True]:
superproject [Invenio]:
transifex_project [invenio-rdm-extension-demo]:
extension_class [InvenioRDMExtensionDemo]:
config_prefix [INVENIO RDM EXTENSION DEMO]:
-----
```


Extensions HowTo

- [Example code here](#)

```
"""Invenio module to showcase how to add an extension to InvenioRDM"""

from __future__ import absolute_import, print_function

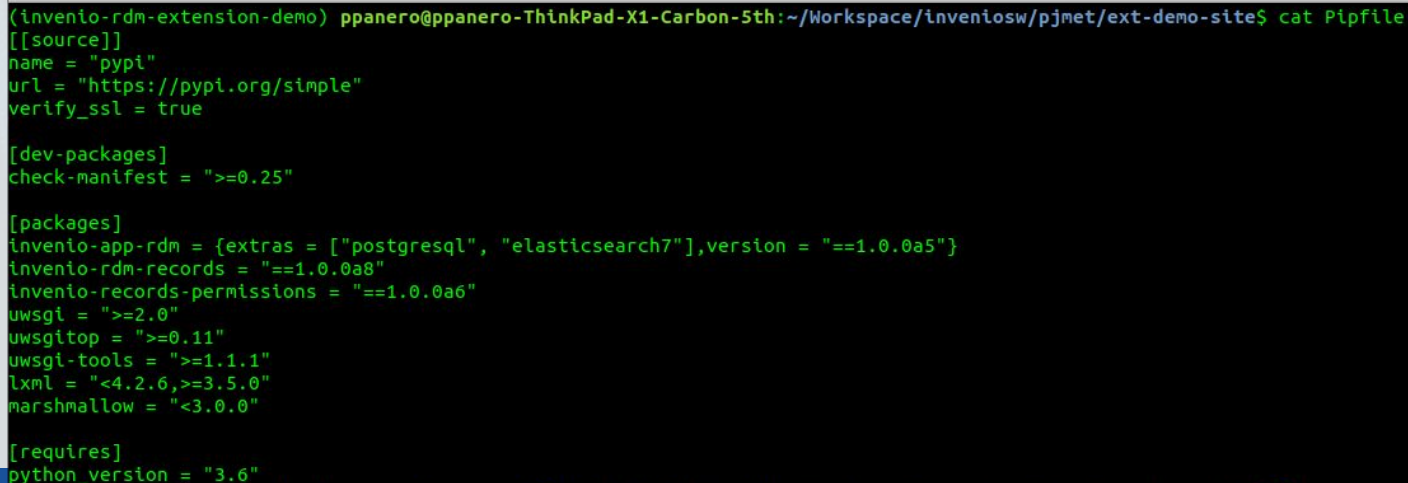
from flask import Blueprint, render_template
from flask_babel import gettext as _

blueprint = Blueprint(
    'invenio_rdm_extension_demo',
    __name__
)

@blueprint.route("/rdm-ext-demo")
def index():
    """RDM Extension Demo view"""
    return 'RDM Extension Demo!'
```

Extensions HowTo

- Install you extension: **pipenv**



```
(invenio-rdm-extension-demo) ppanero@ppanero-ThinkPad-X1-Carbon-5th:~/Workspace/inveniosw/pjmet/ext-demo-site$ cat Pipfile
[[source]]
name = "pypi"
url = "https://pypi.org/simple"
verify_ssl = true

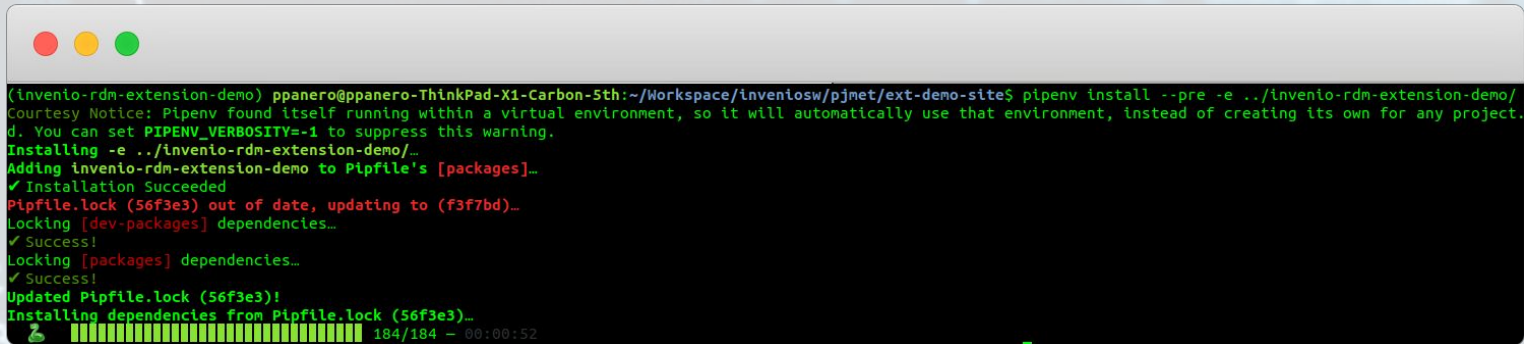
[dev-packages]
check-manifest = ">=0.25"

[packages]
invenio-app-rdm = {extras = ["postgresql", "elasticsearch7"], version = "==1.0.0a5"}
invenio-rdm-records = "==1.0.0a8"
invenio-records-permissions = "==1.0.0a6"
uwsgi = ">=2.0"
uwsgitop = ">=0.11"
uwsgi-tools = ">=1.1.1"
lxml = "<4.2.6,>=3.5.0"
marshmallow = "<3.0.0"

[requires]
python_version = "3.6"
```

Extensions HowTo

- Install (Attention to **--pre**)



```
(invenio-rdm-extension-demo) ppanero@ppanero-ThinkPad-X1-Carbon-5th:~/Workspace/inveniosw/pjmet/ext-demo-site$ pipenv install --pre -e ../invenio-rdm-extension-demo/
Courtesy Notice: Pipenv found itself running within a virtual environment, so it will automatically use that environment, instead of creating its own for any project.
d. You can set PIPENV_VERBOSITY=-1 to suppress this warning.
Installing -e ../invenio-rdm-extension-demo/...
Adding invenio-rdm-extension-demo to Pipfile's [packages]...
✓ Installation Succeeded
Pipfile.lock (56f3e3) out of date, updating to (f3f7bd)...
Locking [dev-packages] dependencies...
✓ Success!
Locking [packages] dependencies...
✓ Success!
Updated Pipfile.lock (56f3e3)!
Installing dependencies from Pipfile.lock (56f3e3)...
█ 184/184 - 00:00:52
```


Extensions HowTo

- Install (Attention to **--pre**)

```
ppanero@ppanero-ThinkPad-X1-Carbon-5th:~/Workspace/inveniosw/pjmet/ext-demo-site$ cat Pipfile
[[source]]
name = "pypi"
url = "https://pypi.org/simple"
verify_ssl = true

[dev-packages]
check-manifest = ">=0.25"

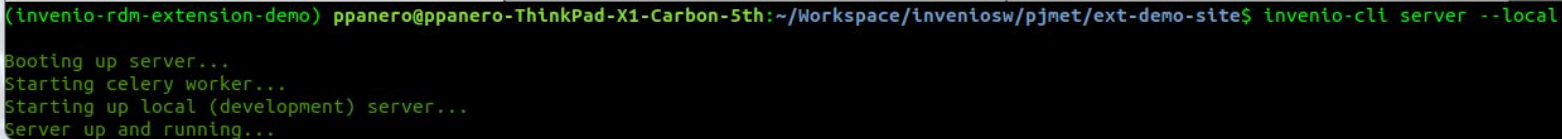
[packages]
invenio-app-rdm = {extras = ["postgresql", "elasticsearch7"], version = "==1.0.0a5"}
invenio-rdm-records = "==1.0.0a8"
invenio-records-permissions = "==1.0.0a6"
uwsgi = ">=2.0"
uwsgitop = ">=0.11"
uwsgi-tools = ">=1.1.1"
lxml = "<4.2.6,>=3.5.0"
marshmallow = "<3.0.0"
invenio-rdm-extension-demo = {editable = true, path = "../invenio-rdm-extension-demo"}

[requires]
python_version = "3.6"

[pipenv]
allow_prereleases = true
```

Extensions HowTo

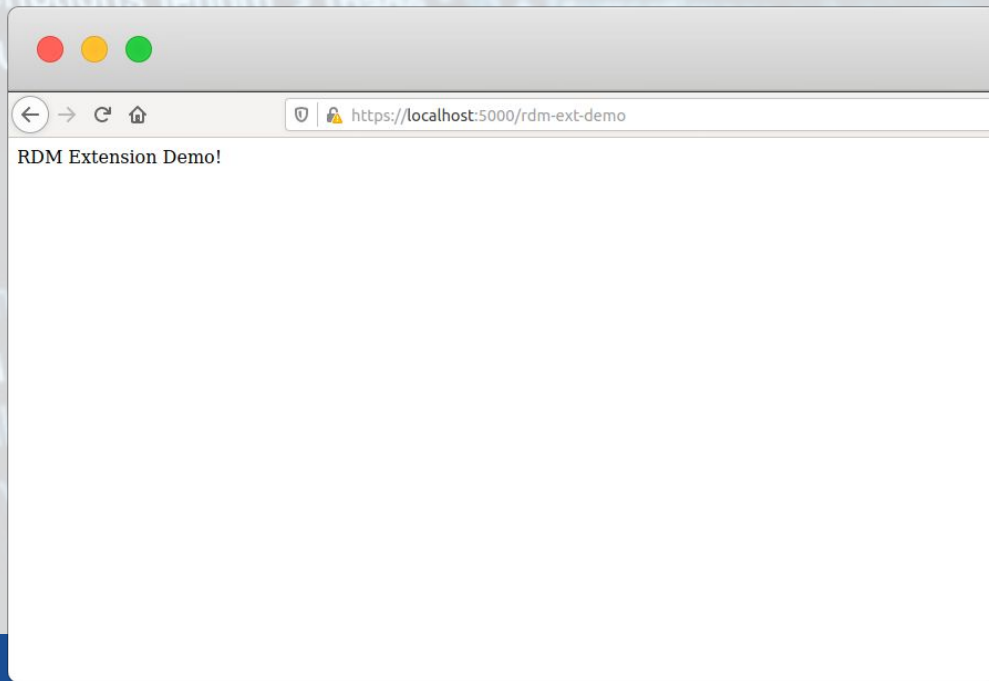
- Run the server



```
(invenio-rdm-extension-demo) ppanero@ppanero-ThinkPad-X1-Carbon-5th:~/Workspace/inveniosw/pjmet/ext-demo-site$ invenio-cli server --local
Booting up server...
Starting celery worker...
Starting up local (development) server...
Server up and running...
```

Extensions HowTo

- Voilà!

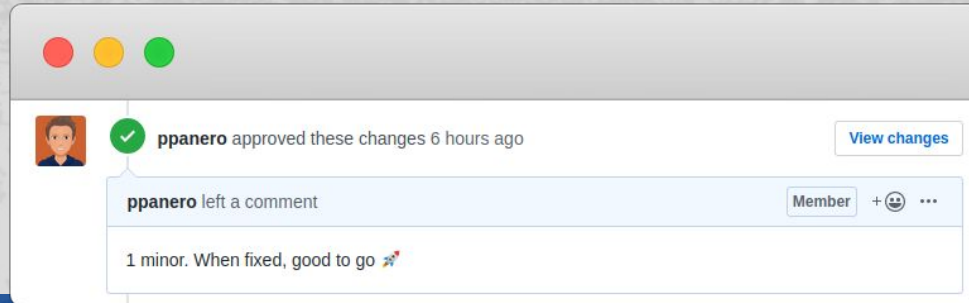


Collaboration “*Guidelines*”

- Challenges:
 - Out-of-Office borders
 - Time-Zones
 - Working cultures / habits

Collaboration “*Guidelines*”

- Solution → GitHub!
- **Rate your comments in the reviews**
 - Avoids time zone blockings
 - Be clear on when something can be merged

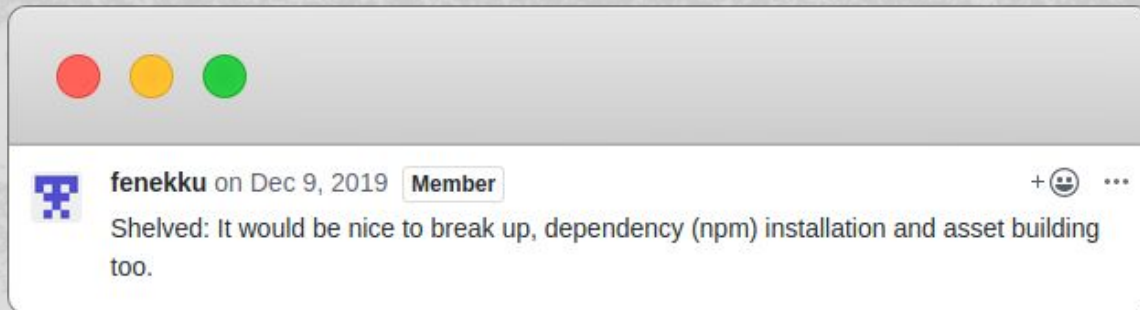


Collaboration “*Guidelines*”

- PR comment scale:
 - Comment / Shelved
 - Minor
 - Moderate / Normal
 - Major

Collaboration “*Guidelines*”

- Comment / Shelved: Something **worth mentioning** but that will be **treated later on** (e.g. different issue).

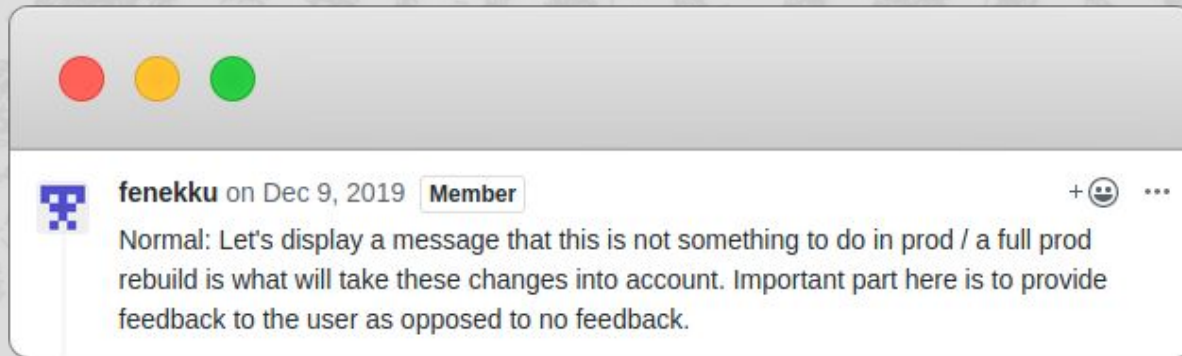


Collaboration “*Guidelines*”

- Minor: Something that the reviewer thinks **might need change**. However, it is not blocking, it is **up to the developer** to choose if and how to change it. **It can be merged!**

Collaboration “*Guidelines*”

- Moderate / Normal: Something that **requires further discussion** (e.g. breaking changes). It **cannot be merged, unless explicitly said** (e.g. choose a solution proposed by the reviewer).



Collaboration “*Guidelines*”

- Major: **Needs discussion**, probably a video call. It has **high implications**. It cannot be merged.

TEAMWORK

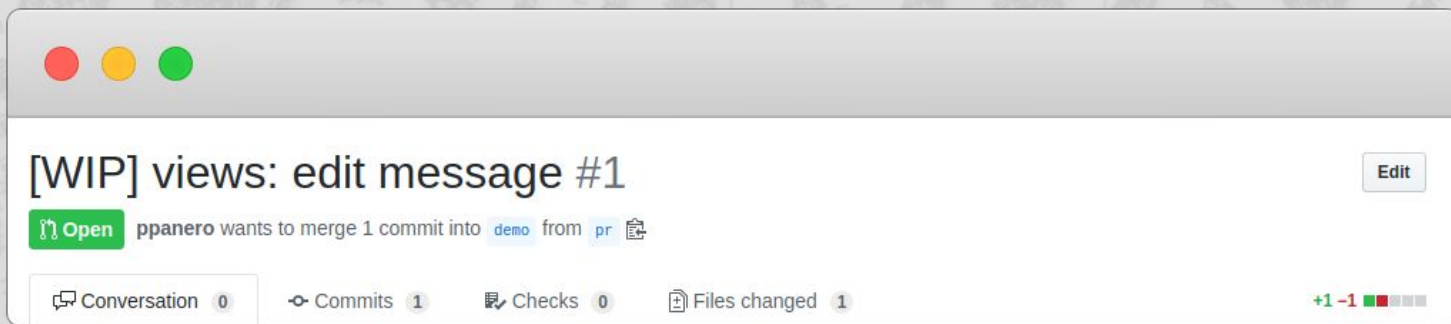
Collaboration “*Guidelines*”

- Propose, let's chat :)
 - Gitter, Video call, in person, letter, whatever means :)

*“If you wanna go fast go alone,
if you wanna **go further go together!**”*

Collaboration “*Guidelines*”

- Make a proposition
- Submitting code to an existing repository → Pull Request (PR)
 - Fork the repository → Contributing Guidelines
 - Create it fast: Use [WIP] in the title → Work in Progress



Collaboration “Guidelines”

- Submitting code to an existing repository → Pull Request (PR)
 - Run tests!

```

[Invenio-rdm-extension-demo] ppanero@panero-ThinkPad-X1-Carbon-51th:~/Workspace/Invenio/pjnet/Invenio-rdm-extension-demo$ ./run-tests.sh
Skipped 3 files
List of files to version control and sdist match
Running pytest
Running egg_info
Writing Invenio_rdm_extension_demo.egg-info/PKG-INFO
Writing dependency links to invenio_rdm_extension_demo.egg-info/dependency_links.txt
Writing entry points to invenio_rdm_extension_demo.egg-info/entry_points.txt
Writing requirements to invenio_rdm_extension_demo.egg-info/requirements.txt
Writing top-level names to invenio_rdm_extension_demo.egg-info/top_level.txt
Reading manifest file 'Invenio_rdm_extension_demo.egg-info/SOURCES.txt'
Reading manifest template 'MANIFEST.in'
Warning: no files found matching '*.po' under directory 'Invenio_rdm_extension_demo/translations'
Warning: no files found matching '*.pot' under directory 'Invenio_rdm_extension_demo/translations'
Warning: no files found matching '*.mo' under directory 'Invenio_rdm_extension_demo/translations'
Writing manifest file 'Invenio_rdm_extension_demo.egg-info/SOURCES.txt'
Writing build.txt
===== test session starts =====
platform linux -- Python 3.9.9, pytest-8.1.2, pluggy-1.5.0
rootdir: /home/ppanero/Workspace/Invenio/pjnet/Invenio-rdm-extension-demo, testpaths: docs, tests, invenio_rdm_extension_demo
plugins: cov 2.8.1, pep8 1.0.6, celery 4.2.2, flask 0.15.0, invenio 1.2.1
collected 28 items

tests/conftest.py
tests/test_invenio_rdm_extension_demo.py ...F
tests/test_invenio_rdm_extension_demo_init.py .
tests/test_invenio_rdm_extension_demo_config.py .
tests/test_invenio_rdm_extension_demo_test.py .
tests/test_invenio_rdm_extension_demo_version.py .
tests/test_invenio_rdm_extension_demo_views.py .

===== FAILURES =====
test_views
base_client = <flask_client.FlaskClient object at 0x7f9c1b1b1b1b>

def test_views(base_client):
    """Test views"""
    res = base_client.get("/rdm-ext-demo")
    assert res.status_code == 400
    AssertionError: assert 200 == 400
    + where 200 = <class 'pytest_flask.plugin.JSONResponse'> streamed [200 OK]-status_code

tests/test_invenio_rdm_extension_demo.py:48: AssertionError
===== warnings summary =====
/home/ppanero/.virtualenvs/invenio-rdm-extension-demo/lib/python3.9/site-packages/_pytest/mark/structures.py:327:
/home/ppanero/.virtualenvs/invenio-rdm-extension-demo/lib/python3.9/site-packages/_pytest/mark/structures.py:327:
/home/ppanero/.virtualenvs/invenio-rdm-extension-demo/lib/python3.9/site-packages/_pytest/mark/structures.py:327: PytestUnknownMarkWarning: Unknown pytest.mark.pep8 - is this a typo? You can register custom marks to avoid this warning - for details, see https://docs.pytest.org/en/latest/mark.html
PytestUnknownMarkWarning:
... Docs: https://docs.pytest.org/en/latest/warnings.html
===== coverage: platform linux, python 3.9.9-final-0 =====
Name                               Stmts  Miss  Cover   Missing
-----
Invenio_rdm_extension_demo/_init_.py    5      0  100%
Invenio_rdm_extension_demo/config.py    11      0  100%
Invenio_rdm_extension_demo/test.py     11      1   90%   35
Invenio_rdm_extension_demo/version.py    3      0  100%
Invenio_rdm_extension_demo/views.py     7      0  100%
TOTAL                                  37      1   97%

===== 1 Failed, 8 passed, 2 warnings in 0.75s =====

```

Collaboration “Guidelines”

- Submitting code to an existing repository → Pull Request (PR)
 - Run tests!

```
(Invenio-rdm-extension-demo) ppanero@ppanero-ThinkPad-X1-Carbon-Stih:~/workspace/invenios/pjnet/invenio-rdm-extension-demo$ ./run-tests.sh
distpand 3 files
Lists of files in version control and sdist match
Running pytest
Running egg-info
Writing invenio_rdm_extension_demo.egg-info/PKG-INFO
Writing dependency links to invenio_rdm_extension_demo.egg-info/dependency_links.txt
Writing entry points to invenio_rdm_extension_demo.egg-info/entry_points.txt
Writing requirements to invenio_rdm_extension_demo.egg-info/requirements.txt
Writing top-level names to invenio_rdm_extension_demo.egg-info/top_level.txt
Reading manifest file 'invenio_rdm_extension_demo.egg-info/SOURCES.txt'
Reading manifest template 'MANIFEST.in'
Warning: no files found matching '*.pot' under directory 'invenio_rdm_extension_demo/translations'
Warning: no files found matching '*.pot' under directory 'invenio_rdm_extension_demo/translations'
Warning: no files found matching '*.po' under directory 'invenio_rdm_extension_demo/translations'
Writing manifest file 'invenio_rdm_extension_demo.egg-info/SOURCES.txt'
Running build_ext

===== test session starts =====
platform linux -- Python 3.6.9, pytest-5.3.2, py-1.8.1, pluggy-0.13.1
rootdir: /home/ppanero/workspace/invenios/pjnet/invenio-rdm-extension-demo, inifile: pytest.ini, testpaths: docs, tests, invenio_rdm_extension_demo
plugins: cov-2.8.1, pep8-1.0.6, celery-4.2.2, Flask-0.15.0, invenio-1.2.1
collected 10 items

tests/conftest.py .
tests/test_invenio_rdm_extension_demo.py ....

Name                               Stmts   Miss  Cover
-----
invenio_rdm_extension_demo/_init_.py   5     0  100%
invenio_rdm_extension_demo/config.py   15     1    93%
invenio_rdm_extension_demo/ext.py      3     0  100%
invenio_rdm_extension_demo/version.py  7     0  100%
invenio_rdm_extension_demo/views.py   11     0  100%
TOTAL                                41     1    97%

===== warnings summary =====
/home/ppanero/.virtualenvs/invenio-rdm-extension-demo/lib/python3.6/site-packages/_pytest/mark/structures.py:327
/home/ppanero/.virtualenvs/invenio-rdm-extension-demo/lib/python3.6/site-packages/_pytest/mark/structures.py:327
/home/ppanero/.virtualenvs/invenio-rdm-extension-demo/lib/python3.6/site-packages/_pytest/mark/structures.py:327: PytestUnknownMarkWarning: Unknown pytest.mark.pep8 - is this a typo? You can register custom marks to avoid this warning - for details, see https://docs.pytest.org/en/latest/mark.html
  PytestUnknownMarkWarning,

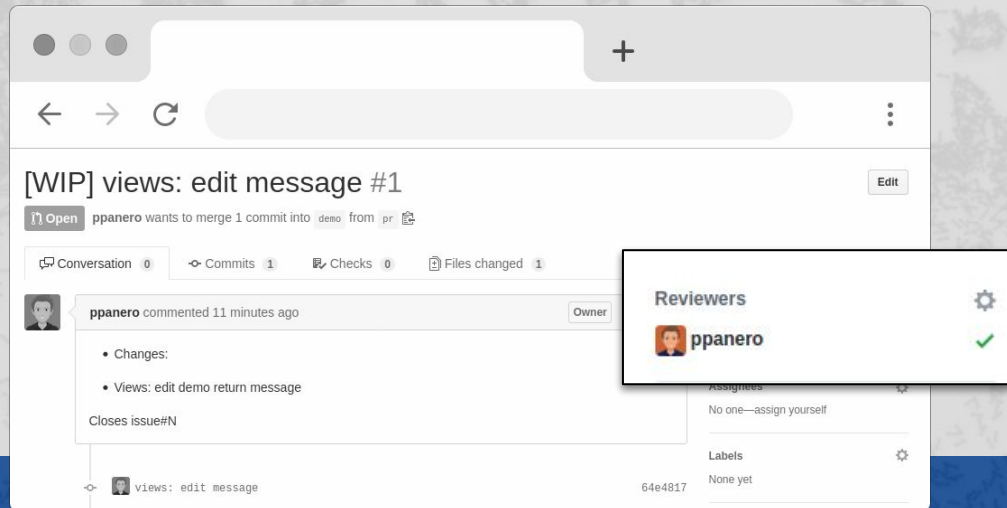
-- Docs: https://docs.pytest.org/en/latest/warnings.html

===== coverage: platform linux, python 3.6.9-final-0 =====
Name                               Stmts   Miss  Cover
-----
invenio_rdm_extension_demo/_init_.py   5     0  100%
invenio_rdm_extension_demo/config.py   15     1    93%
invenio_rdm_extension_demo/ext.py      3     0  100%
invenio_rdm_extension_demo/version.py  7     0  100%
invenio_rdm_extension_demo/views.py   11     0  100%
TOTAL                                41     1    97%

===== 10 passed, 2 warnings in 0.47s =====
```

Collaboration “Guidelines”

- Submitting code to an existing repository → Pull Request (PR)
 - Document it!
 - Assign a reviewer!



Collaboration “*Guidelines*”

1. Propose, chat → Agreement
2. WIP
3. Test
4. Document
5. Assign a reviewer
6. Enjoy the new feature ;)

Let's code!

1. **Create your extension ([Cookiecutter on GitHub](#))**
2. **Install it ([Extension example on GitHub](#))**
3. **Run it!**