OSSR GitLab-Zenodo connection

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Outline

- GitLab – Zenodo connection
  - `Zenodo metadata` schema
  - *Codemeta2zenodo* and *ZenodoCI* packages
  - Implementation into the OSSR

- OSSR metadata – open points for discussion
  - Metadata beyond software
    - (Container) Images
    - Jupyter notebooks

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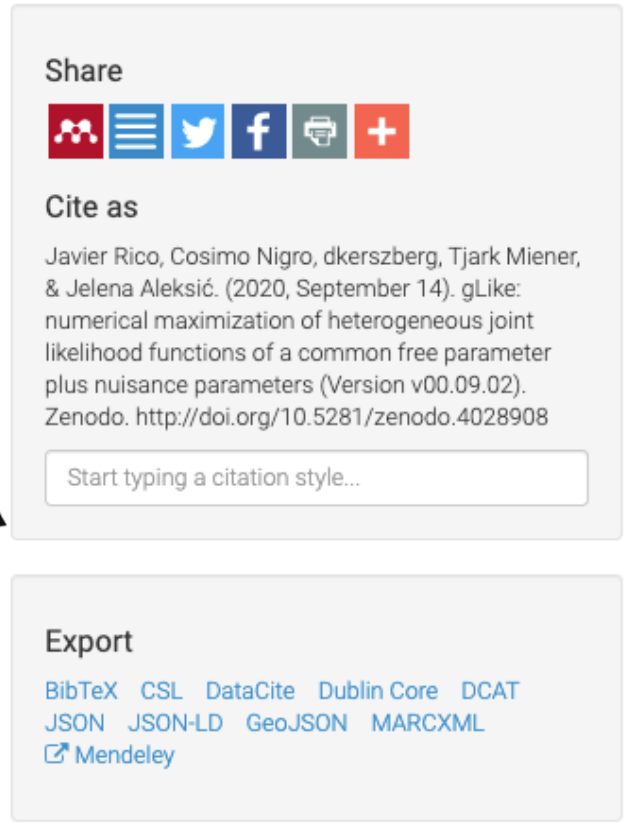
CodeMeta and Zenodo ¿💔?

- Zenodo does not read/ingest CodeMeta metadata files
  - Despite of being a CodeMeta supporter
  - Metadata in Zenodo follow their own schema (full schema)
    - https://zenodo.org/schemas/records/record-v1.0.0.json
  - Stored in a `.zenodo.json` file.
- However, Zenodo exports their metadata into various schemas



!! If you are using GitHub and their automatic Github-Zenodo connection:

- the `.zenodo.json` file has priority over the GitHub-Zenodo API communication

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Implementation into the OSSR environment

- CodeMeta – Zenodo metadata converter:

https://gitlab.in2p3.fr/escape2020/wp3/codemeta2zenodo

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Implementation into the OSSR environment

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https://gitlab.in2p3.fr/escape2020/wp3/codemeta2zenodo

codemeta2zenodo

pipeline passed | License MIT

Codemeta to Zenodo metadata schema crosswalk and converter.

Install

```
$ git clone https://gitlab.in2p3.fr/escape2020/wp3/codemeta2zenodo.git
$ cd codemeta2zenodo
$ pip install .
```

Quickstart

```
$ codemeta2zenodo --input_codemeta_file codemeta.json
```

codemeta.json 3.63 KB Edit


```
{
  "@context": "https://doi.org/10.5063/schema/codemeta-2
  "@type": "SoftwareSourceCode",
  "name": "ESCAPE template project",
  "description": "A template repository for the ESCAPE p
  "keywords": "template",
  "license": "https://spdx.org/licenses/GPL-3.0+",
  "identifier": "10.5281/zenodo.3884963",
  "softwareVersion": "v2.0",
  "developmentStatus": "active",
  "codeRepository": "https://gitlab.in2p3.fr/escape2020/
  "runtimePlatform": "Python >3.6",
  "downloadUrl": "https://gitlab.in2p3.fr/escape2020/wp3
  "fileSize": "39.3 kB",
  "installUrl": "https://gitlab.in2p3.fr/escape2020/wp3/
  "releaseNotes": "Documentation and implementation of t
  "dateCreated": "2019-11-05",
  "datePublished": "2019-12-12",
  "dateModified": "2020-06-08",
  "isAccessibleForFree": true,
  "isPartOf": [
    "https://gitlab.in2p3.fr/escape2020",
    "https://projectescape.eu/"
  ],
  "contIntegration": "https://gitlab.in2p3.fr/escape2020/wp3/template_project_escape/-/pipelines",
  "buildInstructions": "https://gitlab.in2p3.fr/escape2020/wp3/template_project_escape/-/blob/master/RE
  "issueTracker": "https://gitlab.in2p3.fr/escape2020/wp3/template_project_escape/-/issues",
  "readme": "https://gitlab.in2p3.fr/escape2020/wp3/template_project_escape/-/blob/master/README.md",
  "programmingLanguage": [
    {
      "@type": "ComputerLanguage",
      "name": "Python",
      "url": "https://www.python.org/"
    },
    {
      "@type": "ComputerLanguage",
      "name": "Bash",
      "url": "https://www.gnu.org/software/bash/"
    }
```


.zenodo.json 1.06 KB Edit | Web IDE | Replace | Delete


```
{
    "metadata": {
        "access_right": "open",
        "communities": [
            {
                "identifier": "escape2020"
            }
        ],
        "creators": [
            {
                "affiliation": "LAPP, CNRS",
                "name": "Vuillaume, Thomas",
                "orcid": "0000-0002-5686-2078"
            },
            {
                "affiliation": "LAPP, CNRS",
                "name": "Garcia, Enrique",
                "orcid": "0000-0003-2224-4594"
            }
        ],
        "description": "A template repository for the ESCAPE project",
        "grants": [
            {
                "id": "10.13039/501100000780::824064"
            }
        ],
        "keywords": [
            "template"
        ],
        "language": "eng",
        "license": "GPL-3.0+",
        "notes": "Release Notes: Documentation and implementation of the last version for CI/CD to Zenod
        "publication_date": "2019-12-12",
        "title": "ESCAPE template project",
        "upload_type": "software",
        "version": "v2.0"
    }
}
```


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Implementation into the OSSR environment

- CodeMeta – Zenodo metadata converter:

https://gitlab.in2p3.fr/escape2020/wp3/codemeta2zenodo

- ZenodoCI – Zenodo API Handler:

https://gitlab.in2p3.fr/escape2020/wp3/zenodoci

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Implementation into the OSSR environment

- CodeMeta – Zenodo metadata converter:

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- ZenodoCI – Zenodo API Handler:

https://gitlab.in2p3.fr/escape2020/wp3/zenodoci

- Installing both packages into a Docker container and adding it into the registry @ GitLab

.gitlab-ci.yml 787 Bytes — Edit | Web IDE | Replace | Delete

```yaml
stages:
  - test
  - deploy

test_install:
  stage: test
  image: python:3.6.11-buster
  script:
    - apt-get -y update
    - pip install .


deploy_from_container:
  stage: deploy
  image: gitlab-registry.in2p3.fr/escape2020/wp3/zenodoci

  before_script:
    - wget -q https://gitlab.in2p3.fr/escape2020/wp3/zenodoci/-/raw/master/zenodoci/parse_last_release.sh
    - test_connection_zenodo --token $SANDBOX_ZENODO_TOKEN --sandbox True -p $CI_PROJECT_DIR

  script:
    - mkdir -p build
    - /bin/bash parse_last_release.sh $CI_PROJECT_NAME $CI_PROJECT_URL
    - ls ./build

    - upload_new_deposit --token $SANDBOX_ZENODO_TOKEN --sandbox True --input-dir ./build
    - upload_new_version_deposit -t $SANDBOX_ZENODO_TOKEN -s True -i ./build -id $ZENODO_PROJECT_ID
  only:
    - tags
```


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Implementation into the OSSR environment

From a single click

- Publishes source code (updates your existing record with new versions)

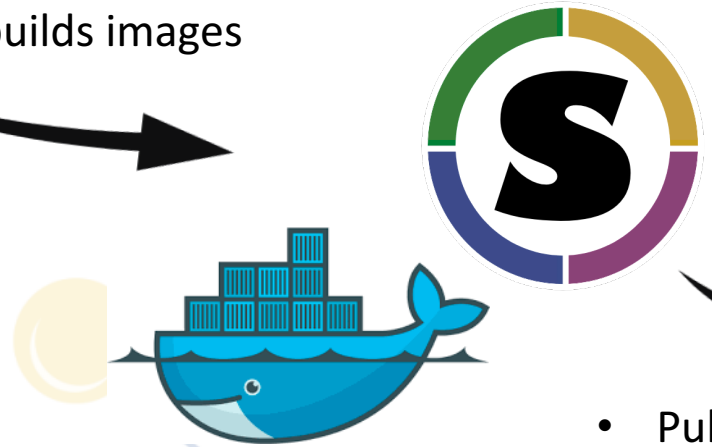
zenodo

- Long term archived
- Findable
- Citable

GitLab

1. Make a new tag (release)
2. Let the CI do the rest

- builds images



- publishes to OSSR

- Publishes on registries

docker hub

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Implementation OSSR environment – TODO list

- Adapt *codemeta2zenodo* to partners needs
  - Multiple licensing *{ "license": "./COPYRIGHT" }*
    - https://gitlab.in2p3.fr/escape2020/wp3/escape_metadata_template/-/issues/4
  - Multiple funding grants
    - https://gitlab.in2p3.fr/escape2020/wp3/escape_metadata_template/-/issues/3
  - …
- Automatize *ZenodoCI–codemeta2zenodo* image building
- Automatize the upload of Docker/Singularity images into Zenodo

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Beyond `CodeMeta+Schema.org`

- Metadata schema for images ?
- Metadata schema for notebooks / pipelines ?
- *`DataCite`* schema ?
  - Zenodo harvest protocol (OAI-PMH) exports records using this schema.
    - Open Archives initiative protocol for Metadata Harvesting

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