



ESCAPE

European Science Cluster of Astronomy &
Particle physics ESFRI research Infrastructures

OSSR – technical discussion

OSSR Open Collaboration meeting, 15/03/2023

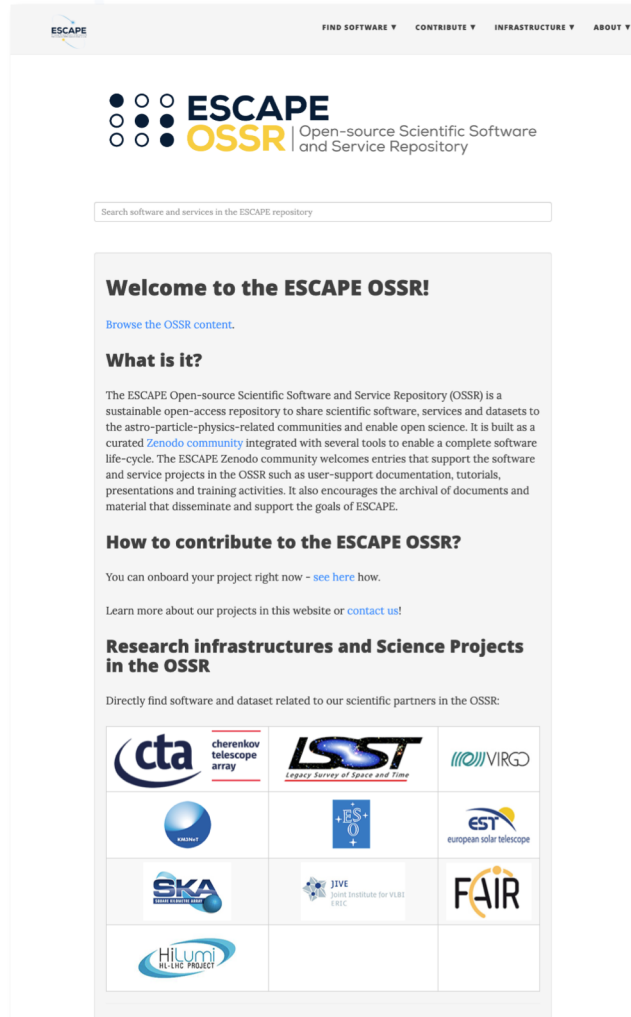
T. Vuillaume



OSSR technical parts (a reminder)



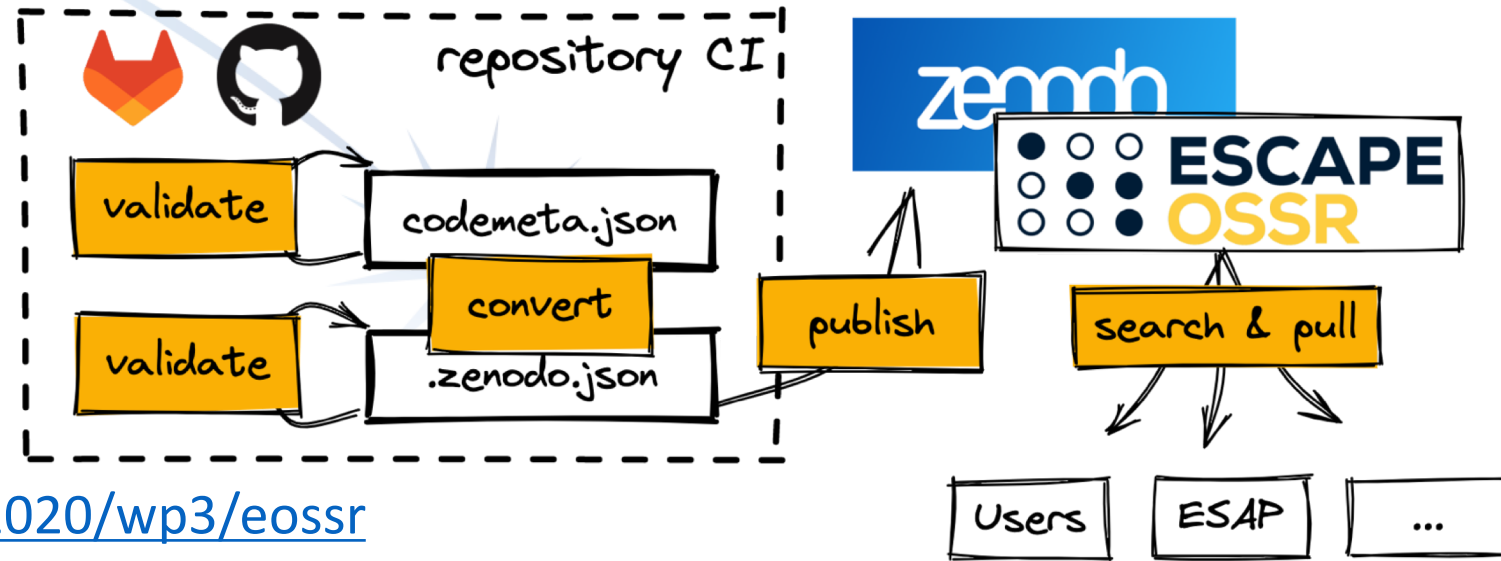
OSSR entry point: <https://purl.org/escape/ossr>



The screenshot shows the ESCAPE OSSR website. At the top, there is a navigation bar with links for 'FIND SOFTWARE', 'CONTRIBUTE', 'INFRASTRUCTURE', and 'ABOUT'. Below this is the ESCAPE OSSR logo and a search bar. The main content area features a 'Welcome to the ESCAPE OSSR!' message, a 'What is it?' section explaining the repository's purpose, a 'How to contribute to the ESCAPE OSSR?' section, and a 'Research infrastructures and Science Projects in the OSSR' section with a grid of logos for various projects like CTA, LSST, VIRGO, SKA, FAIR, etc.

- Browse the OSSR
- Guidelines & policy
- Tutorials and tools
- Contact
- Developed as static pages hosted on gitlab pages
<https://gitlab.in2p3.fr/escape2020/wp3/ossr-pages>





- eOSSR library

- Dev: <https://gitlab.in2p3.fr/escape2020/wp3/eossr>
- Doc: <https://escape2020.pages.in2p3.fr/wp3/eossr/>
- OSSR: <https://doi.org/10.5281/zenodo.6826881>
- **Gathers all OSSR developments and technical definitions**
 - **OSSR API:** send request to the OSSR, find and filter software and services, upload new entries, update existing entries
 - **CI:** automated upload / update using gitlab CI
 - **Metadata:** schema definition, crosswalk between CodeMeta and Zenodo, validation



MetaData generator and validator

<https://escape2020.pages.in2p3.fr/wp3/codemeta-generator/>

[Run online](#)

ESCAPE OSSR CodeMeta generator

This tool helps you create a CodeMeta.json file for your software. Note however that it is not exhaustive and other fields can be manually added in your file following the [CodeMeta schema](#).

Most fields are optional. Mandatory fields will be highlighted when generating Codemeta.

The software itself

Name
great-software

Description
so great

Documentation or readme
[https://great.doc.com](#)

Creation date
2022-11-30

First release date
2022-11-30

License
MIT

Discoverability and citation

Unique identifier
10.151.xxxxx

Application category
Astronomy

Keywords
Projects: CTA, ESO-VLego, ELT, EST, FAIR, HL-LHC, K338eT, LSST, LOFAR, SKA) Content: Astronomy, Astroparticle physics, Particle physics

Funding
ESCAPE 824054
great funding software development

Funder
European Union's Horizon 2020 research and innovation programme
organization funding software development

Authors and contributors can be added below

Development community / tools

Code repository
git+https://github.com/YourRepoName.git

Continuous integration
[https://travis-ci.org/YourRepoName](#)

Issue tracker
[https://github.com/YourRepoName/issues](#)

Related links

Run-time environment

Programming Language
C#, Java, Python 3

Runtime Platform
.NET, JVM

Operating System
Android 1.0, Linux, Windows, macOS

Other software requirements
Python 3.4
[https://github.com/pet/requests](#)

Current version of the software

Version number
1.0.0

Release date
2022-11-30

Download URL
[https://example.org/MySoftware.tar.gz](#)

Release notes
Change log: this and that;
bugfixes: that and this.

Additional Info

Reference Publication
[https://doi.org/10.1000/xyz123](#)

Development Status
[see www.codemeta.org for details](#)

Is part of
[http://The.Bigger.Framework.org](#)

Authors (add at least one)
[Add one](#) | [Remove last](#)

Contributors (optional, order does not matter)
[Add one](#) | [Remove last](#)

Maintainer (required)

Given name
Jane

Family name
Doe

E-mail address
jane.doe@example.org

URI
<http://orcid.org/0000-0002-1825-0097>

Affiliation
Department of Computer Science, University of P

[Generate codemeta.json](#) | [Reset form](#)

codemeta.json:

```
{
  "@context": "https://doi.org/10.5563/schemas/codemeta-2.0",
  "@type": "SoftwareSourceCode",
  "license": "https://spdx.org/licenses/MIT",
  "dateCreated": "2022-11-30",
  "datePublished": "2022-11-30",
  "dateModified": "2022-11-30",
  "name": "great-software",
  "version": "1.0.0",
  "description": "so great",
  "readme": "https://great.doc.com",
  "softwareVersion": "1.0.0",
  "maintainer": {
    "@type": "Person",
    "givenName": "Jane",
    "familyName": "Doe",
    "email": "jane.doe@example.org",
    "uri": "http://orcid.org/0000-0002-1825-0097",
    "affiliation": "Department of Computer Science, University of P"
  }
}
```

Note that you can validate your generated codemeta.json with the eOSSR CLI tool [ossr-metadata-validator](#)

Validate and convert your metadata

This notebook will help you validate your metadata for an upload to the ESCAPE OSSR.

To do so, upload your codemeta metadata, either using a URL pointing to the 'codemeta.json' file, uploading a 'codemeta.json' file or copying the metadata in the text box below.

Note that you can generate your ESCAPE codemeta file using the online generator: <https://escape2020.pages.in2p3.fr/wp3/codemeta-generator/>

Load codemeta from a json file

[Upload \(0\)](#)

Load codemeta from an URL

URL:

[Load](#)

codemeta:

[Validate !](#)

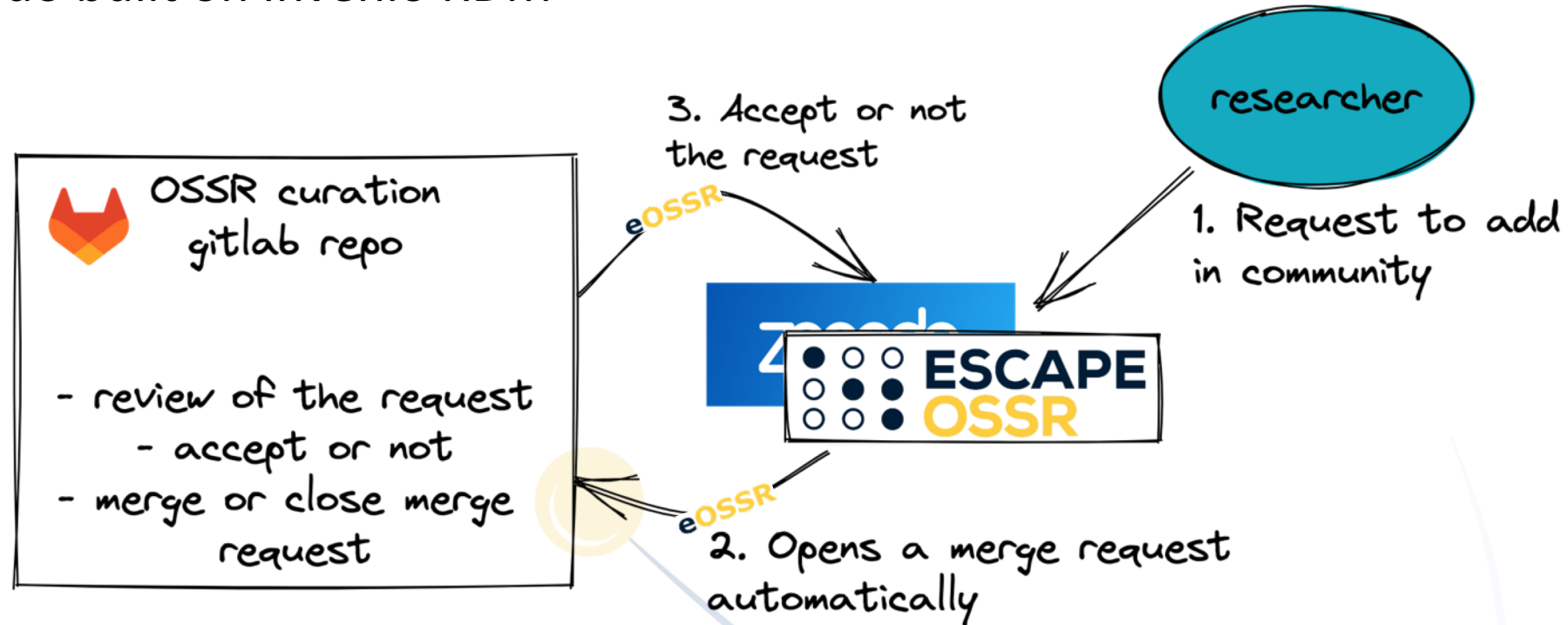
[Convert to .zenodo.json](#)

[Add ESCAPE metadata](#)

Dev: <https://gitlab.in2p3.fr/escape2020/wp3/codemeta-generator>

Curation: ossr-curation

- Issue: Zenodo currently supports a single community maintainer and reviewer
- OSSR curation: a solution to collaboratively and openly review requests in a Zenodo community. Note that it might become obsolete in a future version of Zenodo built on Invenio RDM



Participation and organization

- All developments are **open** ! – we gratefully accept all contributions ;-)
 - See anything that could be improved (as little as spelling mistakes on the website) ?
 - [See the contributing section of eOSSR](#)
 - Open an issue in the concerned repository
 - Send us an email (contacts in the ossr pages)
 - Open a pull request
 - Want to be more actively involved ?
 - **Join our tech group** ([write me](#))
 - Meetings once a month to discuss developments and assign tasks
 - Organisation through milestones and issues
 - Hackatons on the side of general meetings
- Developments will move from `gitlab.in2p3.fr` to `gitlab.com` (TBD just after)



OSSR future developments



Motivations

- **Increase the incentive** for researchers and research software developers to contribute
- **Lower the barrier** to contribute



Increasing the incentive

- More appealing website
 - More appealing display of onboarded software and analysis
 - One page per project
 - Enriched information (going beyond Zenodo display): Contact point, onboarding recorded talk, badges ...
 - Dynamic website
 - Interactive search and display
 - Integrate with our backend onboarding workflow (see after)
 - Techno: Flask?, need a server to host it






Increasing the incentive

- Targeting more clearly and distinctively workflows/analysis (vs software libraries)
 - Make clear distinction between software and analysis (*workflow* in Zenodo metadata type, *applicationCategory* in CodeMeta)
 - Display this type in the record page
 - Raise the requirements for workflows environments => reproducible analysis and runnable in ESAP-like platforms
 - Technically, we could auto-accept [environments files supported by mybinder](#)
 - Curate others
 - Display a link to mybinder in record page
 - Integration with the VRE – ease the publication of complete analysis with environment and REANA workflow in the OSSR



Increasing the incentive

● Badges

- OSSR badge  
- OSSR reproducible analysis badge 
- Integrate with other services to get other levels and types of validations (fairness level, code quality...). If accepted, can be further developed in the framework of the INRA-EOSC-01-02 call.



Increasing the incentive

- Make the onboarding talks as *discovery series*
 - Regular days (monthly?) of onboarding talks (see it as mini-conferences)
 - Communicate about it in advances in our communities
 - A rendez-vous for people to **share** their tools / software / analysis and to **discover** others



Lowering the barrier

- Easier and clearer onboarding

- Single onboarding platform → gitlab.com

- Registering for the onboarding process (better: through dynamic website, otherwise on gitlab.com)

- Curation on gitlab.com

- Process detail in next slide

- Display onboarding status

- Should also be more clear internally !

- Easier contributions to devs
→ gitlab.com



- Integrate onboarding to gitlab.com / ossr-curation
 - Record owner opens an issue in the repo to start the onboarding process following a template. It gets a tag *onboarding*.
 - A date is assigned for a talk (how ? TBD)
 - Onboarding manager communicates with authors in the issue
 - A request to be added to the escape2020 community is done in Zenodo → merge request gets opened automatically
 - Onboarding manager links to the opened issue by commenting in the description *Fixes #000*
 - Curation happens as usual
 - Merge request is accepted and merged
 - Issue gets closed
 - The record is added to our database (in a table file or adding a full markdown page in a directory)



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Discussion from our last OSSR workshop

	GitHub	GitLab.com
+	<ul style="list-style-type: none"> • Most widely used • Better online edition and workflow management • GitHub discussions 	<ul style="list-style-type: none"> • 0 changes in code: project transfer • Keep all branches, MRs... smooth transition • Platform widely used (under other instances) in research institutes
-	<ul style="list-style-type: none"> • Can import git history and branches but not the rest • Work to be done to adapt current tools 	

Test examples:

- <https://github.com/escape2020/ossr-curation>
- <https://gitlab.com/escape-ossr/>
 - <https://escape-ossr.gitlab.io/ossr-pages/>



Lowering the barrier

- Easier metadata management
 - CodeMeta generation
 - GitLab to CodeMeta
 - GitHub to CodeMeta
 - CodeMeta maintenance
 - CodeMeta template
 - CodeMeta update through command lines

→ Will hopefully get better with Zenodo accepting CodeMeta !
(end of 2023?)



Future of Zenodo with InvenioRDM

- <https://blog.zenodo.org/2022/12/07/2022-12-07-zenodo-on-inveniordm/>
- in the coming 6-12 months
- Demo site: <https://zenodo-rdm.web.cern.ch/>
- What's new
 - InvenioRDM supports having members with different roles:
 - Multiple curators, community managers, etc...
 - Submission to communities now enable the curator and uploader to have a conversation directly on the platform
 - depending on the setup, the curation might migrate entirely to Zenodo
 - Upload form
 - APIs backward compatible



Priorities order

- Establishment of the OSSR tech group
- Moving from gitlab.in2p3 to gitlab.com
 - See tasks <https://gitlab.com/escape-ossr/transfer/-/boards>
 - pages
 - eossr
 - codemeta generator
 - ossr-curation
- Add a clearer CONTRIBUTING section
- Integrate onboarding to gitlab.com / ossr-curation
- Youtube playlist for onboarding talks
- CodeMeta templating, improved updating tool and instructions
- Dynamic website

