



Automated FAIR4RS: Software publication with HERMES



HERMES

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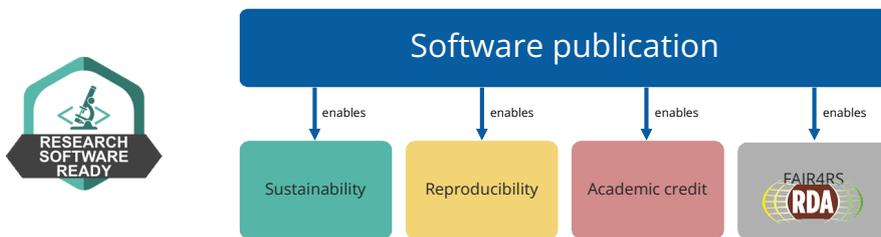
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“To satisfy the principles of [FAIR research software](#), software sustainability and software citation, research software must be formally published. Publication repositories make this possible and provide published software versions with unique and persistent identifiers. However, software publication is still a tedious, mostly manual process and impedes promoting software to first class research citizenship.

S. Druskat, O. Bertuch, G. Juckeland, O. Knodel, and T. Schlauch, *Software publications with rich metadata: State of the art, automated workflows and HERMES concept*, arXiv:2201.09015 [cs], Jan. 2022. doi: 10.48550/arXiv.2201.09015.



The State of the Art

Software metadata (software artifacts) and PID landing page (metadata) are shown alongside a screenshot of a Zenodo repository page for 'agnpy'.

Pull-based workflows



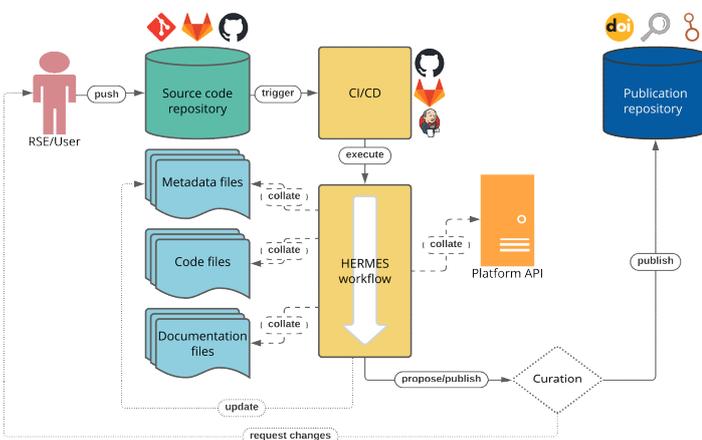
- Code & metadata must be accessible and properly formatted
- Less control over extracted metadata
- + Most prominent examples: Zenodo (and SWH)

Push-based workflows



- + Works for all types of software (closed, restricted, embargoed, open source)
- + Complete control over metadata
- Not many examples or standardised procedures

Simplified Overview of the HERMES Workflow



Workflow fully customizable via modules and configuration for each step.

Target Repositories



... and extensible for others!

Where we are

Milestone "Proof of Concept" reached, continuing with "Alpha":

- ✓ **Harvesting**
Citation File Format, CodeMeta, Git metadata
- **Processing**
Add deduplication, validation
- **Curation/Deposition**
Metadata mapping and deposit for Invenio done. Enable more targets and user feedback via logs
- ✗ **Post-processing**
Update CodeMeta/CFF

✓ = Present | ● = Partially | ✗ = TODO



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