

How to achieve FAIR software publications with HERMES



Overview

- **Presentation**
 - **How to Achieve FAIR Software**
 - **What is HERMES**
 - **How does HERMES work**
- **Hands On**
 - **How to Set up HERMES**
 - **Use HERMES Init**
- **Conclusion**

Software publication

The good news



- **Software is an important research output**
- **Publishing research software supports**
 - **Sustainability**
 - **Reproducibility**
 - **academic credit for RSEs**

Foundations of Research Software

How to achieve FAIR Software



- **1. Use Version Control**
 - **2. Bring Code in sharable state**
 - **3. Add essential Documentation**
 - **4. Add License**
 - **5. Make Code Citable**
 - **6. Publish your Software**
- Hermes init

Excurs: Citation File Format

Structured metadata as citation hint

What is a CITATION.cff file?

`CITATION.cff` files are plain text files with human- and machine-readable citation information for software (and datasets). Code developers can include them in their repositories to let others know how to correctly cite their software.

This is an example of a simple `CITATION.cff` file:

```
cff-version: 1.2.0
message: "If you use this software, please cite it as below."
authors:
  - family-names: Druskat
    given-names: Stephan
    orcid: https://orcid.org/1234-5678-9101-1121
title: "My Research Software"
version: 2.0.4
doi: 10.5281/zenodo.1234
date-released: 2021-08-11
```

<https://citation-file-format.github.io/cff-initializer-javascript/#/>

Who is HERMES?

**Stephan Druskat, Sophie Kernchen,
Michael Meinel, Tobias Schlauch**

Deutsches Zentrum für Luft- und Raumfahrt



**Jeffrey Kelling, Oliver Knodel, David Pape,
Guido Juckeland**

Helmholtz-Zentrum Dresden-Rossendorf



Oliver Bertuch

Forschungszentrum Jülich



HERMES

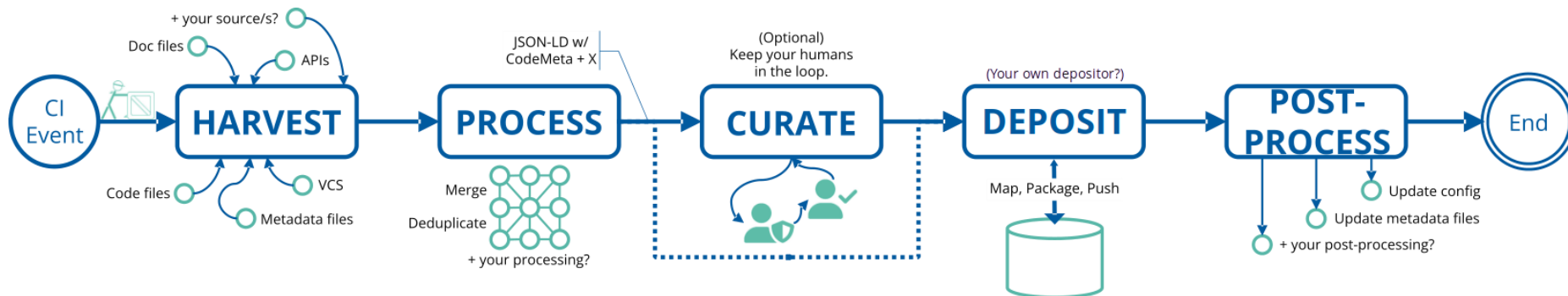
Using a push-based CI workflow to publish software



- Push vs. Pull workflow
- CI triggered (configurable events)
- Pluggable (Python modules)
- Can keep humans in the loop

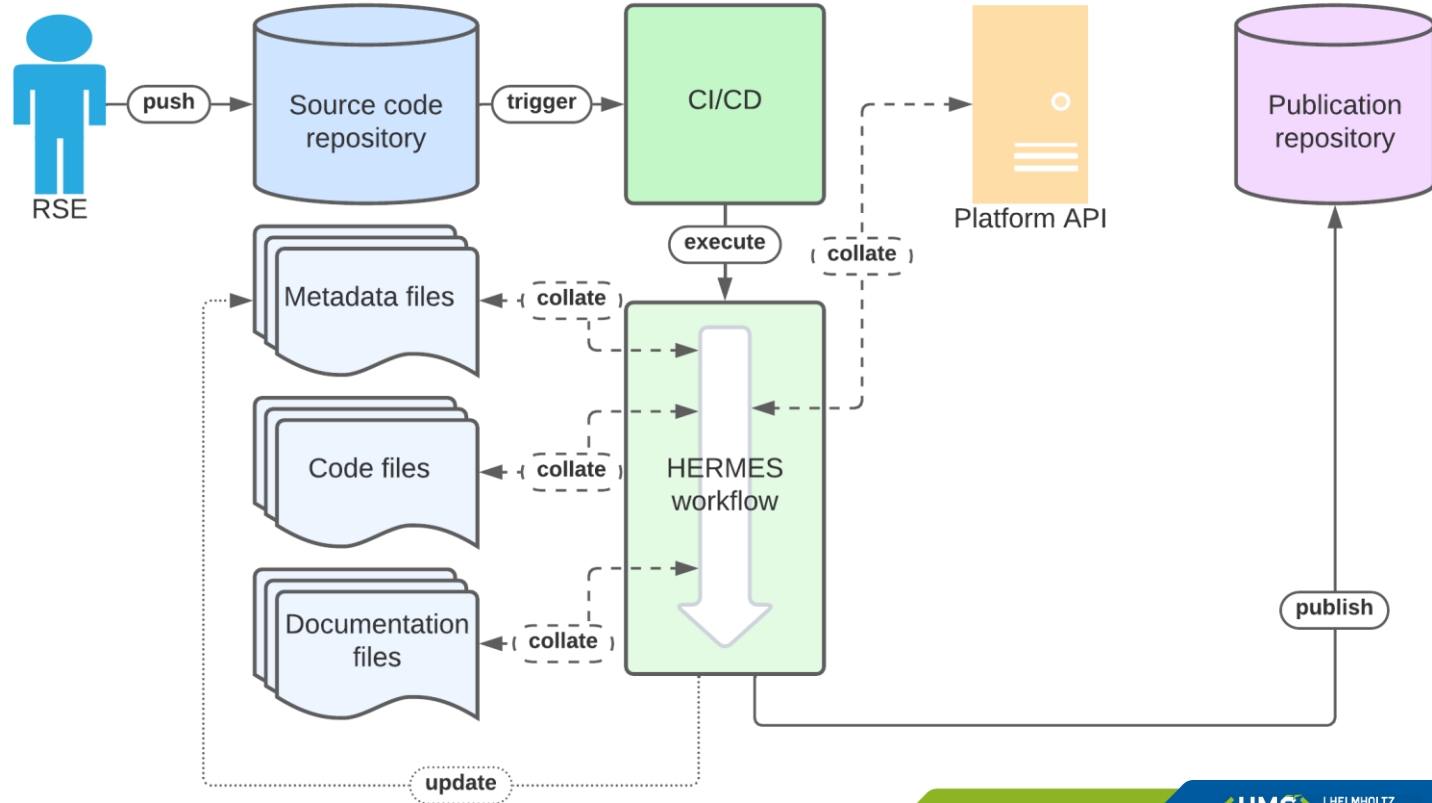
<https://software-metadata.pub>

<https://doc.software-metadata.pub>



Software publication with HERMES

Overview (simplified)



Hands On

- **Who has used HERMES already?**
- [Set up automatic software publishing — HERMES Documentation \(software-metadata.pub\)](#)