



Contribution ID: 19

Type: **Workshop or Hackathon**

Implement an automated release and publication workflow for your GitLab software repository using FACILE-RS

Tuesday 25 February 2025 14:30 (1 hour)

Research software development is a fundamental aspect of modern academic research, and it has now been acknowledged that the FAIR (Findable, Accessible, Interoperable, Reproducible) principles, historically established for research data, should also be applied to research software.

As software is by nature executable and evolving over time, the FAIR principles had to be adapted to this particular type of digital assets, and the FAIR principles for Research Software (FAIR4RS) have been introduced in 2021.

It can be challenging for software developers to adopt the FAIR4RS principles, as it requires for example to archive every software release on a persistent data repository, associated with relevant metadata, which can be time-consuming if done manually.

In this context, the Python package FACILE-RS simplifies the maintenance of software metadata by automating its generation and synchronization in various formats, from a single manually maintained CodeMeta metadata file. It also provides automated pipelines for releasing software on GitLab as well as publishing on the persistent research data repositories RADAR and Zenodo.

In this tutorial, you will use FACILE-RS in your own GitLab software repository (or using our template repository) to automate the creation and synchronization of metadata files for your software, and to implement a semi-automated release pipeline for creating releases on GitLab and Zenodo.

In practice, during this tutorial, you will:

- Create a CodeMeta metadata file for your software.
- Implement a GitLab CI/CD (Continuous Integration/Continuous Delivery) pipeline to generate and synchronize a CFF file and a DataCite metadata record automatically from this CodeMeta file.
- Implement a GitLab CI/CD pipeline for creating releases of your software on GitLab and Zenodo, associated with a persistent identifier. You will then be able to trigger releases of your software just by creating a specific tag in your repository.

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no

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Track Classification: Education: best practices for research software development