

May 21th, 2024

MuCol WP2 meeting



Software + Computing task force report

Last report: [16/04/2024](#)

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on behalf of the
IMCC Software Task Force

^(a) INFN Torino *(Italy)*

Meeting **once a month** according to the initial plan

- 21/03 [Kick-off meeting](#) (decided on the schedule, working format, topics)
- 18/04 [Documentation + Tutorials](#)
+ 07/05
- 21/05 [Software-development model](#) (moved to 04/06)

Task force consists of **7 members:**

- Paolo Andreetto
- Nazar Bartosik
- Alessio Gianelle
- Karol Krizka
- Lawrence Lee
- Thomas Madlener
- **Federico Meloni** (*chair*)

All ideas and thoughts are organised offline in a Google Doc

↳ discussed online in a meeting to converge on a plan agreed by all the members

1. All documentation and tutorials are kept public

- keeping source code based on Mkdocs hosted on GitHub
- compiled and published using GitHub or GitLab CI
- investigating the use of [wiki.js](#) for a more interactive editing experience
 - ↳ would require a dedicated web-server that has to be maintained by us

2. Clear separation between tutorials and documentation

- **tutorials** oriented at users: example of a complete setup and analysis workflow
- **documentation** oriented at developers: how to use and extend each component

3. Links to versioned external documentation wherever possible

with duplication of critical parts to keep in sync with our software stack

4. Part of the software training can be done under [HEP Software Foundation](#) development under Spack + Key4hep

5. Common structure and formats

- organisation similar to Key4hep approach
- Doxygen for API documentation
- Sphynx for the top-level documentation
- usage instructions for each package defined inside of its own repository
- need standardised naming conventions and README format
- published documentation for each [mucoll-stack](#) release + the latest nightly release + special tags can be created for tutorials or other training events

6. Automated building, validation and publishing

- actual setup instructions, external links and code snippets validated during CI
- package-level documentations cherry-picked by a dedicated script
 - ↳ automatically integrated into the top-level documentation

7. Responsibilities

- protected **main** branch of the top-level documentation
 - ↳ merge requests must be approved by a moderator (*restricted list of developers*)
- README and API documentation of each package maintained by their developers following the standardised convention (*still under development*)
- tutorials maintained by the team of tutorial organisers