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ESM-Tools

Newsletter January 2019

Last update from: January 15, 2019

Announcements:

First release:

September 4, 2018

Next planned major release:

March 19, 2019

Next planned code freeze:

March 5, - March 19, 2019

Next esm-tools Developer Meetings:

February 5, 2019

March 19, 2019

April 2, 2019

May 7, 2019

9:00-11:00, AWI, Building F,
Glaskasten

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Dear users of the esm-tools,

we wish you all a happy and successful new year!

This is the fourth edition of the esm-tools newsletter. We will give you an update about general news, new features, bug-fixes and upcoming features as discussed in the last esm-tools developer meeting. You are kindly invited to the next esm-tools developer meeting on February 5, 2019 from 9-11 in the Glaskasten of building F.

The esm-tools developer team

1. News

1.1. esm-tools goes Python

We decided to port the functions of the esm-tools (esm-master, esm-runscreens, etc.) to Python. This will only affect the development of the back-end of the esm-tools. The basic usage of the runscreens will not change. This means that for the user nothing will change in the workflow of carrying out model experiments.

The portation will be already part of the upcoming second release on March 19, 2019 with a preceding two-week code freeze (see also the announcements on the left side).

The purpose of this porting is to make the esm-tools even better to maintain and expand for the current and potential new developers and users.

1.2. esm-tools@gitlab.dkrz

Spring cleaning

Prior to the second release, and as an agenda item on the next developer meeting, we would like to do a spring cleaning on all repositories. This includes all branches, issues and merge requests. Please consider closing all your issues and merge requests that are still open but outdated or have resolved. Please delete any unused branches if they have merged or become obsolete for other reasons.

Regarding the features of the next major release, please find a list of already scheduled features in the following (next page). If you have any further features please inform us asap, but at latest by the next developer meeting (February 5, 2019).

2. Scheduled features for second release

New supported models and systems

- Vilma
- NEMO and NEMO-IFS
- AWI-CM 3
- HLRN
- MESSy

New features

- esm-tools back-end in Python
- Compiling of PISM with esm-master
- GUI for esm-master
- Functionality to get around esm-environment
- Monitoring and error handling during model run-time
- New supported scenarios (e.g. HIST)

- Automated tests
- Branching-off experiments with AWI-CM (adapting ECHAM restart files)

3. Wishlist for upcoming features

- Possibility to change the Echam output via the run-script

4. Upcoming events related to esm-tools

- HGF ESM Coupling Workshop, April 1-3, 2019, Oberpfaffenhofen
- EGU General Assembly, April 7-12, 2019, Vienna
- HGF ESM General Assembly, September 2019, Bremerhaven
- HGF ESM Summer School, September 9-19, 2019, Bad Aibling (Germany)

A. esm-tools@gitlab.dkrz

Each repository of the esm-tools has two branches. The default branch is 'release'. This is the branch that will come with 'git clone' and holds the latest stable version of the esm-tools. We highly recommend to all users to use this release branch when carrying out model experiments. We will only give full user support to this 'release' branch.

Supported Branches

- release
 - Default branch
 - Latest stable release
 - Full user support
 - Update only at next planned release date
 - Bugfixes will be merged at any time
- develop
 - Branch to collect new features and bugfixes for next release
 - Testing
 - Work in progress
 - Limited developer support
 - Will be merged into release at next planned release date
- feature branches of developer
 - Development branches for new features and bugfixes
 - Non-permanent
 - No user support

B. Documentation

esm-usermanual

The current version of the usermanual can be found here:

https://gitlab.dkrz.de/esm-tools/esm-usermanual/blob/release/esm_usermanual.pdf

GitLab Wiki

For each esm-tools repository you find a Wiki page. Here you will find a How to ...? section and other FAQ and known issues. You are very much welcome to add new entries or answer questions from others. Thank you in advance for your participation. Here is the link to the esm-runscripsts Wiki:

<https://gitlab.dkrz.de/esm-tools/esm-runscripsts/wikis/home>

Code documentation

To generate a documentation of the source code we use doxygen. The documentation will be generated automatically. In order to make your comments readable by the doxygen system they need to have the following syntax. Each comment line has to start with ##. Please place at least the following two lines directly above the function and adapt them with respect to your code:

```
## @fn function_name()
## @brief Short description
```