

Install MW2

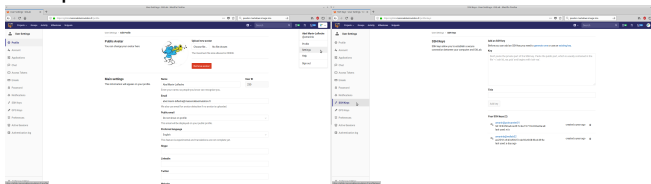
GitLab repository

MW2 is hosted on a gitlab server at Maison de la Simulation.

<https://gitlab.maisondelasimulation.fr/amarinla/mw2>

Setup a user account

- ▶ Send an e-mail to gitlab@maisondelasimulation.fr
- ▶ name, and the reason you want to register
- ▶ only institutional email addresses are accepted
- ▶ Setup ssh authentication



Download the source code

Now you are ready to download the source code:

```
git clone  
git@gitlab.maisondelasimulation.fr:amarinla/mw2.git
```

Install requirements

- ▶ Fortran compiler
- ▶ MPI Library
- ▶ pFunit (<http://sourceforge.net/projects/pfunit/>)
- ▶ python and numpy

make/config.mk

- ▶ define compilation variables in the file make/config.mk.

```
# Compilation options
```

```
F90 := command-to-compile-fortran-source-code
```

```
F90FLAGS := compilation-flags
```

```
FPPFLAGS := preprocessor-flags
```

```
LDFLAGS := linker-flags
```

```
J := flag-to-specify-modfiles-output-dir
```

```
# Path to pFUnit (Unit testing Framework)
```

```
PFUNIT := /path/to/pfunit/install/directory
```

make/config-gnu-linux.mk

```
# Compilation options
```

```
F90 := mpif90
```

```
F90FLAGS := -O2 -g
```

```
FPPFLAGS :=
```

```
LDFLAGS :=
```

```
J := -J
```

```
# Path to pFUnit (Unit testing Framework)
```

```
PFUNIT := /opt/pfunit/pfunit-parallel
```

Compile !

`make`

- ▶ build directory in `build/`
- ▶ executable `mw`

Test

Unit tests aim at validating individual component of the code.

```
make check
```

or

```
make mw_tests  
cd tests/pFUnit  
../../mw_tests
```

On batch processing system it is required to build the *mw_tests* executable and create the appropriate job submission script.

Validate

Some reference test cases are being added in order to validate the code as a whole.

- ▶ NIST validation case

```
cd tests/nist/SPCE-water-reference-calculations/config1/  
../../../../mw  
python2 ../nist_validation.py 1
```

- ▶ other ? Work in Progress!