

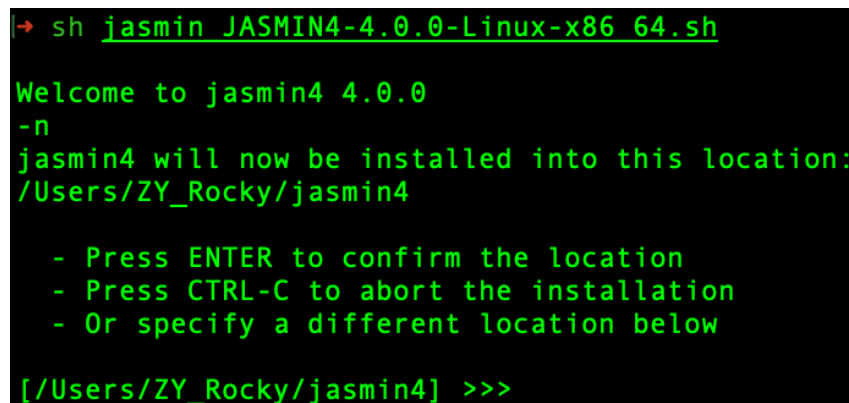
# JASMIN v4.0.0 Installation & OMARE Compilation Manual

## 0. Software Requirement

- Operating System: RedHat 7.2
- MPI Environment: mvapich2-2.2
- Compiler: GCC 4.8.5
- JASMIN: apply and download from the original JASMIN application page at: <http://www.caep-scns.ac.cn/JASMIN.php>. And it provided in case that anyone interested in selecting specific version/platform for JASMIN.
- OMARE : download OMARE v1.0 codebase omare\_gyre\_v20220107.tar.gz at: <https://zenodo.org/record/6699768>

## 1. JASMIN Installation

- a) `sh jasmin_JASMIN4-4.0.0-Linux-x86_64.sh`
- b) confirm the path of the installation directory or set `$JASMIN_INSTALL_PATH` (Optional)



```
➔ sh jasmin_JASMIN4-4.0.0-Linux-x86_64.sh

Welcome to jasmin4 4.0.0
-n
jasmin4 will now be installed into this location:
/Users/ZY_Rocky/jasmin4

- Press ENTER to confirm the location
- Press CTRL-C to abort the installation
- Or specify a different location below

[/Users/ZY_Rocky/jasmin4] >>>
```

- c) Add JASMIN to Environment Variables

## 2. OMARE Compilation

- a) `tar -xvf omare_gyre_v20220107.tar.gz`
- b) `cd omare_gyre_v20220107`
- c) Modify CMakeList.txt:
  - i. Set `JASMIN_ROOT` as your `$JASMIN_INSTALL_PATH`

```

10 if(NOT JASMIN)
11     set(JASMIN_ROOT /home/usr/soft/jasmin-4.1.0)
12 endif()

```

- ii. Set JASMIN\_VERSION as your \$CASE\_PATH (the directory of your case)

```

18 set(JASMIN_VERSION /home/usr/omare/omare_gyre_v20220107)

```

- iii. Set \$HDF5\_PATH and \$NETCDF4\_PATH

```

20 include_directories ("/public1/home/scb1187/soft/include")
21 link_directories ("/public1/home/scb1187/soft/lib")

```

- d) mkdir build at \$CASE\_PATH

- e) cd build

- f) cmake ..

```

For compatibility, CMake is ignoring the variable.
This warning is for project developers. Use -Wno-dev to suppress it.

-- Found JASMIN 4.1.0 (/public1/home/scb1187/soft/jasmin-4.1.0)
-- Configuring done
-- Generating done
-- Build files have been written to: /public1/home/scb1187/omare/omare_gyre_v20220107/build

```

- g) make

```

[ 2%] Building CXX object CMakeFiles/main2d.dir/source/main_Nemo.C.o
ccplus: warning: command line option '-fdefault-real-8' is valid for Fortran but not for C++ [enabled by default]
ccplus: warning: command line option '-ffree-line-length-none' is valid for Fortran but not for C++ [enabled by default]
ccplus: warning: command line option '-fcray-pointer' is valid for Fortran but not for C++ [enabled by default]
In file included from /public1/home/scb1187/omare/omare_gyre_v20220107/source/FieldDumpPatchStrategy.h:12:
0,
    from /public1/home/scb1187/omare/omare_gyre_v20220107/source/NemoLevelIntegrator.h:17,
    from /public1/home/scb1187/omare/omare_gyre_v20220107/source/main_Nemo.C:13:
/public1/home/scb1187/omare/omare_gyre_v20220107/source/PatchDataIdManager.h: In member function 'void PatchDataIdManager::InitializeVariable(JASMIN::tbox::Pointer<jolly::Database>)':
/public1/home/scb1187/omare/omare_gyre_v20220107/source/PatchDataIdManager.h:14:7: note: variable tracking size limit exceeded with -fvar-tracking-assignments, retrying without
    void InitializeVariable(JASMIN::tbox::Pointer<JASMIN::tbox::Database> input_db){
    ^
[ 3%] Linking CXX executable main2d
[100%] Built target main2d

```

- h) mpirun -n 4 ./main2d ../input/nemo-2d\_0.5.input

```

dia_wri(internal area): sshn(1,1) = -1.5270947696515913E-003
ssh_swp: sshn(1,1)= -1.0210255580512270E-003
CALL tra_ldf_iso
ssh_swp: sshn(1,1)= 0.0000000000000000
*****
Done advanceLevel 0 (spatial/temporal ratio=1,1,time=5)
*****

+++++
At end of timestep # 5
+++++

ssh_swp: sshn(1,1)= 0.0000000000000000
JASMIN_NEMO_AMR done!
(base) [scb1187@ln131%bscc-a6 build]$

```

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