

LMDZ Training January 2024



Preparatory session 19th December 2024

Goal : have LMDZ compiled and running on your personal workstation in sequential and parallel modes and have a look at how to examine results using ferret (with a ferret tutorial)

GoToMeeting link :

https://www.gotomeet.me/EMC3_LMDZ/formationlmdz

<https://lmdz.lmd.jussieu.fr/utilisateurs/formation/2024>

LMDZ Training January 2024



Pre-requisites :

Personal computer (or account) with Linux OS - native or virtual machine - (other OS will be challenging) and following utilities :

- wget, tar, gzip, make, cmake
- fortran compiler (preferably gfortran), gcc
- some netcdf file visualisation program (ferret, grads, ncview, ...)

Highly recommended :

- parallel libraries : MPI and OMP (necessary for some of the tutorials)
- netcdf libraries (to speed up the compilation)
- tmate helpful as well for help

LMDZ Training January 2024



Pre-requisites met ?

The sequential installation :

Install the model using the script that lives here :

https://lmdz.lmd.jussieu.fr/pub/install_lmdz.sh

On your computer :

```
bash$ wget https://lmdz.lmd.jussieu.fr/pub/install_lmdz.sh
bash$ chmod +x install_lmdz.sh
bash$ ./install_lmdz.sh -name LMDZTraining -rad oldrad
```

LMDZ Training January 2024



If all goes well, you should see the following text on your terminal (after a few minutes) :

```
in abort_gcm
Stopping in leapfrog
Reason = Simulation finished

Everything is cool
#####
Simulation finished in
.....
```

For any other result, please ask for help during the session.

LMDZ Training January 2024



The parallel installation with netcdf:

In the directory where you have copied the `install_lmdz.sh` script, launch it again with the following options :

```
bash$ ./install_lmdz.sh -name LMDZORpar -rad oldrad \  
-parallel mpi_omp -veget CMIP6 -netcdf 0
```

If all goes well, you should again see the `Everything is cool` message. If not, please inform us. If there is a problem with the netcdf library installed on your machine, you could try the following command :

```
bash$ ./install_lmdz.sh -name LMDZORpar -rad oldrad \  
-parallel mpi_omp -veget CMIP6 -netcdf `pwd`/LMDZTraining
```

LMDZ Training January 2024



Failure ? :

We are here to help, don't hesitate to ask for help

- during the session, GoToMeeting chat
- mattermost channel « #LMDZ Training session 2024 » on LMDZ mattermost:
link : <https://mattermost.lmd.ipsl.fr/lmdz/channels/lmdz-training-session-2024>
(clicking on the link will ask you to open an account on the server if you do not already have one)
- lmdz-users mailing list :
<https://listes.ipsl.fr/sympa/info/lmdz-users>
- LMDZ sites :
<https://lmdz.lmd.jussieu.fr/> <https://lmdz-forge.lmd.jussieu.fr/mediawiki/LMDZPedia>