

Wikiprint Book

Title: 1. Common tools

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Repository for shared files and shared tools

The necessary files to properly use the IPSL tools and models are located on shared spaces in the various computing centers.

Those shared spaces are located on specific accounts:

- TGCC : *p86ipsl*. Owner O. Marti.
- IDRIS : *rpsl035*. Owner M.-A. Foujols.
- IPSL (ciclad) : *igcmg*. Owner M.-A. Foujols.
- LSCE : *igcmg*. Owner O. Marti.

dods accounts also exists at TGCC. They host data distributed by 'OpenDAP'. The owner is O. Marti.

The following people can modify the data and tools on these accounts: A. Caubel, O. Marti, M.-A. Foujols, P. Brockmann, A. Cozic, S. Denvil, J. Ghattas, C. Ethe, S. Flavoni, J. Servonnat, S. Labetoulle.

1. Common tools

1.1. General environment

On the `$HOME` of each common account you will find an executable to properly setup the environment which will allow you to use the IPSL models and tools. Loading modules and specifying `$_PATH` for the basic softwares (compilers, libraries, post processing tools, etc...) The environment file has different versions. Its general name is `.atlas_env_[machine]_[bash|ksh|csh]`.

For example (note the period at the beginning of the name) :

```
.atlas_env_asterix_bash # To use if your connection shell is bash
.atlas_env_asterix_ksh  # To use if your connection shell is ksh.
.atlas_env_asterix_csh  # To use if your connection shell is csh or tcsh
```

If the file `_bash` does not exist, use the file `_ksh`.

1.2. Rebuild

When the model is in parallel mode and the parallel I/O are not activated, the outputs are truncated into different files (one per MPI process), each of them only containing part of the computation domain. The rebuild phase allows to reconstruct the complete file covering the whole domain.

The rebuild utilities are used by the IPSL models in the post-processing phase. The rebuild can also be done interactively

The rebuild tools are stored :

- at ada : `/linkhome/rech/psl/rpsl035/bin`
- at curie : `/ccc/cont003/home/dsm/p86ipsl/rebuild/src_X64_CURIE/modipsl_v2_2_2_netcdf4.2/bin`
- at obelix : `/home/users/igcmg/rebuild/bin`

1.3. Post processing tools

The fast and atlas tools used by the post processing are also stored on a shared space.

- At TGCC: in `~p86ipsl/atlas` and `~p86ipsl/fast`
- At IDRIS: in `~rpsl035/atlas` and `~rpsl035/fast`

2. Repository for shared files

2.1. IGCM directory

The files needed to run the models (initial conditions, boundary conditions, forcings) are stored in IGCM directory at shared accounts. The shared accounts from the different computing centres are regularly synchronized. The synchronization procedure between different computing centers is done

manually on demand. The IGCM tree exists at TGCC, at IDRIS, at IPSL and at LSCE(part of IGCM only). The IGCM directory is located in the storage spaces of each computing centres.

This common directory is defined by `libIGCM_sys : variable R_IN`.

- The TGCC repository for shared files is located:
 - On the WORKDIR : `R_IN=/ccc/work/cont003/dsm/p86ipsl/IGCM`.
- The IDRIS repository for shared files is located:
 - On the ada machine, on WORKDIR : `R_IN=/workgpfs/rech/psl/rps1035/IGCM`
 - On the ergon machine, on `R_IN=/u/rech/psl/rps1035/IGCM`. This space migrated on bands is used for back ups and is not used by the IPSL models and tools.
- LSCE, obelix : `R_IN=/home/orchideeshare/igcmg/IGCM`
- IPSL ([ciclad](#)) : `R_IN=/prodigfs/ipslfs/igcmg/IGCM`
- There is also an access through DODS : <http://dods.ipsl.jussieu.fr/igcmg/IGCM>

The organization of the sub directories in IGCM has been changed the 19th of June 2015. Currently in IGCM, the following sub directories exist:

- IGCM/ATM -> input files for the atmospheric model LMDZ
- IGCM/SRF -> input files for the land surface model ORCHIDEE. The forcing files for ORCHIDEE offline are found in IGCM/SRF/METEO
- IGCM/CHM -> input files for the chemistry model INCA
- IGCM/OCE -> input files for the ocean system NEMO (OPA, LIM, PISCES)
- IGCM/CPL -> input files for the coupler OASIS
- IGCM/RESTART -> restart files for some reference simulations

In addition 2 directories INIT and BC containing links to the above directories exist in IGCM. INIT and BC directories are needed only to keep retro compatibility after the reorganization was done. These directories are used in the `comp.card` in older configurations. INIT and BC will be remove during 2016(to be announced) :

- IGCM/INIT -> temporary directory, contains links to the above directories
- IGCM/BC -> temporary directory, contains links to the above directories

Before the reorganization following directories existed in IGCM :

- IGCM/STORAGE -> contains all the files necessary for the different configurations ;
- IGCM/INIT -> for each configuration links are done to IGCM/STORAGE/INIT. Some files are also stored directly in here.
- IGCM/BC -> for each configuration links are done to IGCM/STORAGE/BC. Some files are also stored directly in here.
- IGCM/RESTART -> restart files for some reference simulations

2.1.1. The IGCM/RESTART directory

The IGCM/RESTART directory contains the model initial states for a few important experiments. For the moment IPSL-CM5A (LR and MR) is the only configuration concerned. Previously these files were stored into IGCM_RESTART directory. Now these files are very easy to describe with `#{R_IN}` variable.

2.2. Wind Boundary condition and limit.nc file

You can find [here](#) some information on these files