Repository for shared files and shared tools

Table of Content

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`.

On a few computing machines, you must setup the environment differently for compilation and execution phases and for the graphic post processing phases. Files therefore exist in two versions.

For example :

```
.atlas_env_calcul_curie_ksh  # For compiling and executing
.atlas_env_post_curie_ksh    # For post processing
```

To this day, no machine is concerned.

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

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 grouped in common accounts. The shared accounts from the different computing centers are regularly synchronized. Part of it is synchronized at LSCE. The `IGCM` tree exists at TGCC, at IDRIS and at IPSL. The `IGCM` directory is located in the storage spaces of each computing centers.

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/rpsl035/IGCM`
  - On the ergon machine, on `R_IN=/u/rech/psl/rpsl035/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=/ipslfs/igcmg/IGCM`

In this shared directory, there are three directories :

- `IGCM/STORAGE`-> contains all the files necessary for the different configurations ;
- `IGCM/INIT` -> for each configuration points to `IGCM/STORAGE/INIT` ;
- `IGCM/BC` -> for each configuration points to `IGCM/STORAGE/BC`.

This link system is not very well respected and lots of files are found in `INIT` and `BC`.

The synchronization procedure between different computing centers is done manually on demand.

2.2. The IGCM_RESTART directory

The `IGCM_RESTART` directory contains the model initial states for a few important experiments. This directory is duplicated on the different computing centers at the same location as `IGCM`. For the moment IPSL-CM5A (LR and MR) is the only configuration concerned.