Wikiprint Book

Title: 1. IDRIS presentation

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Working at IDRIS

1. IDRIS presentation

See: ■http://www.idris.fr/eng

2. How to install your environment at IDRIS

- Find more information about IDRIS on ■http://www.idris.fr/eng/ and about the Jean-Zay machine here : ■http://www.idris.fr/eng/jean-zay/
- Connection to IDRIS is possible with ssh command from a registered machine. All forms are available here : ■http://www.idris.fr/eng/forms/index-forms.html
- The Jean-Zay machine at IDRIS can be used for our configurations. **It supports the model execution and post processing.**
- Note: the software ■the Tina software installed at IDRIS gives access to hourly, daily and weekly backups of your $HOME files.

It is important to take the time to install a comfortable and efficient environment.

- We recommend to follow the example of the rpsl035 login's environment which is in bash. Don't use the default .bash_profile but use instead the ~rpsl035/.bash_login file. Copy this file to your home and remove the default .bash_profile.

```
ryyy999@jean-zay: rm $HOME/.bash_profile
ryyy999@jean-zay: cp /gpfswork/rech/psl/commun/MachineEnvironment/jeanzay/bash_login $HOME/.bash_login
```

- The .bash_login file sources the file /gpfswork/rech/psl/commun/MachineEnvironment/jeanzay/env_jeanzay which loads libraries and post processing tools needed on our platform such as:

```
module load netcdf/4.7.0/intel-19.0.4-mpi
module load nco/4.7.9/intel-19.0.4-mpi
module load ncview/2.1.7/intel-19.0.4-mpi
```

For esgf/thredds access, use the command mfdods on Ergon. This creates the link (24h after the first time) visible here: ■http://prodn.idris.fr/thredds/catalog/ipsl_public/catalog.html

```
# Export a file:
ryyy999@ergon: mfdods my_file -d pub/ryyy999/my_dir

# Once the access activated, you must do the following to destroy a file:
ryyy999@ada: mfdods -r /u/DODS/pub/ryyy999/my_dir/my_file
```

3. Repository with input files R_IN

The shared repository with input files is stored at jean-zay here: /gpfswork/rech/psl/commun/IGCM. This folder is noted using the variable R_IN in the comp.card in libIGCM configurations. The folder R_IN is the same and regulary synchronized between the computing centers TGCC, IDRIS, ESPRI mesocenter(ciclad/climserv) and LSCE(obelix). Contact the plateforme groupe if you don't have read access to these files with your login at jean-zay.

4. Accounting

To know the computing time used by your group (updated once a day):

```
plab999@jean-zay:~> idracct
```

If you are working on several projects, your current project is referenced by the environnement variable IDRPROJ (echo $IDRPROJ). idracct gives information about your current project. To check accounting on other project, you need to change the value of IDRPROJ (eval $(idrenv -d <other_project>) and run idracct again.

5. Things to know about file systems

5.1. WORK ($WORK)

- The $WORK Jean-Zay is large and permanent but it is not backed up.
- The $WORK Jean-Zay can be extended (20 To for the group for example). The project investigator can ask an extension on the IDRIS's extranet. See: ■http://www.idris.fr/extranet.html or directly from an authorized IP : ■https://extranet.idris.fr/.

5.2. SCRATCH ($SCRATCH)

- The $SCRATCH is a semi-permanent space with a 30-day file lifespan, not backep-up
- Very large quotas per project

5.3. JOBSCRATCH ($JOBSCRATCH)

is the temporary execution directory specific to batch jobs

- The $JOBSCRATCH is created automatically when a batch job starts and, therefore, is unique to each job
- It is destroyed automatically at the end of the job. Therefore, it is necessary to manually copy the important files onto another disk space (the WORK or the SCRATCH) before the end of the job.

5.4. STORE ($STORE)

- The $STORE has to be used for archiving big files
- can be extended (300 To for the group for example). The project investigator can ask an extension on the IDRIS's extranet. See: ■http://www.idris.fr/extranet.html or directly from an authorized IP : ■https://extranet.idris.fr/.

5.5. Quotas

To check the used space and the size of the HOME, WORK and STORE:

```
# Quota HOME
ryyy999@jean-zay: idrquota -m

# Quota WORKDIR
ryyy999@jean-zay: idrquota -w

# Quota STORE
ryyy999@jean-zay: idrquota -s
```

6. Simulation outputs

Final simulation outputs are stored on Jean-Zay $STORE space in IGCM_OUT directories.

The IDRIS's esgf/thredds server is not yet documented for Jean-Zay machine.

7. About Password

At IDRIS, you have a unique password for all computers. Password have to be changed one time per year. The command to change your password is passwd . You receive a mail 2 weeks before password expiration.

8. The IDRIS's machines

Jean Zay for computing part