

## Working at IDRIS

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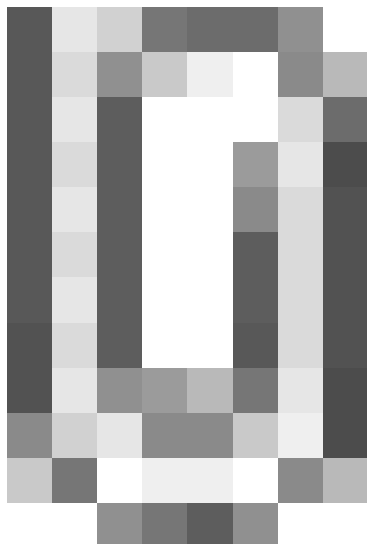
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## 1. IDRIS presentation

See: <http://www.idris.fr/eng>

## 2. IDRIS's machines and file systems



## 3. How to install your environment at IDRIS

- Find more information about IDRIS on <http://www.idris.fr/eng/> and for new users here : [http://www.idris.fr/static/intro/doc\\_nouvel\\_utilisateur-eng.html](http://www.idris.fr/static/intro/doc_nouvel_utilisateur-eng.html)
- 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>
- [Scripts environment at IDRIS](#)
- The Ada 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@ada: rm $HOME/.bash_profile
ryyy999@ada: cp ~rpsl035/.bash_login $HOME/.
```

- This file include /smphome/rech/psl/rpsl035/.atlas\_env\_ada\_intel\_2013\_0\_bash which include
  - The path of the compiling tools fcm and the rebuild tool used to reconstruct files from a parallel model:

```
export PATH=/smphome/rech/psl/rpsl035/FCM/bin:$PATH
```

- The modules giving access to libraries and post processing tools needed on our platform.

```
module load netcdf (currently netcdf/seq/4.1.3 in interactive mode)
module load ferret/6.85
module load nco/4.4.6
module load cdo/1.6.5
```

- Avoid messages displayed when connecting on Ada and Ergon. Do the following tests:
  - Make sure that the command rsh ergon pwd returns a unique line with the HOME on Ada.

```
ryyy999@ada: rsh ergon pwd
/arch/home/rech/yyy/ryyy999
```

Make sure the copy of a file using rcp works properly in the two directions. The following test transfers the file **a** containing the date:

```
ryyy999@ada: date > a ; rcp a ergon:
```

- Transfers Ada/Ergon must be done with mfgget/mfput.

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](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
```

## 4. Accounting

Since 2016, usage of computing time and quotas are printed at beginning of each new session.

```
*****
* Consommation du projet  XXXXX - groupe : XXX                *
* ada      :      10231 h   (  34.10% de l'allocation )        *
* HOME     :      5394 Mio ( 95%)   - Inodes -      17787 ( 11%) *
* WORKDIR  :      11018 Gio ( 50%)   - Inodes -     2831719 ( 80%) *
* Ergon    :      188700 Gio ( 55%)   - Inodes -     6177427 ( 88%) *
*****
```

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

```
plab999@ada:~> cpt
```

## 5. Things to know about file systems

### 5.1. WORKDIR

- The \$WORKDIR Ada is large but it is not saved.
- The \$WORKDIR Ada 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. ERGON

- The \$HOME Ergon has to be used for archiving big files

The \$HOME Ergon 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/>.

you can use idrls to know the status of a file stored on ergon. See `idrls -?. m` means migrated on tape only, - means on disk.

```
idrls IGCM/RESTART/IPSLCM6/DEVT/piControl/01T03V14/*/Restart/*
M ACCESS      L USER      GROUP      SIZE      MOD_DATE    ACC_DATE    EXP_DATE    FILE_NAME
=====
- -rwxrwxr-x 1  rpslxxx    psl      218188352  09.06.2015  22.01.2016  22.01.2017  IGCM/RESTART/IPSLCM6/DEVT/piControl/01T03
m -rwxrwxr-x 1  rpslxxx    psl      1411362796 09.06.2015  22.01.2016  22.01.2017  IGCM/RESTART/IPSLCM6/DEVT/piControl/01T03
```

### 5.3. Quotas

Since 2016, usage and quotas are printed at beginning of each new session.

```
*****
* Consommation du projet XXXXX - groupe : xxx *
* ada      :      10231 h   ( 34.10% de l'allocation ) *
* HOME     :      5394 Mio ( 95%)   - Inodes -      17787 ( 11%) *
* WORKDIR  :      11018 Gio ( 50%)   - Inodes -     2831719 ( 80%) *
* Ergon    :      188700 Gio ( 55%)   - Inodes -     6177427 ( 88%) *
*****
```

To check the used space and the size of the HOME, WORKDIR and ERGON:

```
# Quota HOME
ryyy999@ada: quota_u

# Quota WORKDIR
ryyy999@ada: quota_u -w

# Quota ERGON
ryyy999@ergon: quota_u
```

## 5.4. Access

Since january 2017, access to other is prohibited. You have to use idracl to give specific access. Documentation :

■ <http://www.idris.fr/ada/configuration-droits-acces.html>

Exemples to give access to a list of groups to HOME ergon, HOME and WORKDIR ada :

```
ergon> for g in yyy zzz ; do echo $g ; idracl -a -g $g ; done
ada> for g in yyy zzz ; do echo $g ; idracl -w -a -g $g ; idracl -a -g $g ; done
```

Verification :

```
ada> cd ; ls -ld .
drwxr-xr-x+ 24 rxxx003 xxx 8192 Jan 19 12:13 .
ada> idracl -l

Liste des logins et groupes autorises a acceder
a mon espace /linkhome/rech/xxx/rxxx003
=====
logins autorises :
groupes autorises : yyy zzz
```

In case of problems, please contact the IDRIS' assistance.

## 6. Simulation outputs

Final simulation outputs are stored on Ergon in IGCN\_OUT directories. There are also available from Adapp in \$ARCHIVE/IGCM\_OUT but not directly from Ada.

The IDRIS's esgf/thredds server is accessible from here : ■ [http://prodn.idris.fr/thredds/catalog/ipsl\\_public/catalog.html](http://prodn.idris.fr/thredds/catalog/ipsl_public/catalog.html)

## 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

- [Ada](#) for computing part
- [Adapp](#) for post-processing part