The Lofar Login Environment (LLE)

This page describes the standard login environment for new users on the LOFAR cluster nodes like CEP3. Existing accounts can be easily modified; see below for a manual to do this.

General

The Lofar Login Environment sets a few things for your account, and allows you to easily initialise often used packages and tools at login time. To this purpose we provide a few simple standardized login-scripts.

Use (t)csh or bash!

To be able to use the LLE environment you must either use a `(t)csh` or `bash` login shell. We do not support scripts for any other shells.

What to do when you get an account

(t)csh

If you have chosen for the `(t)csh` shell, you do as follows:

- Log in
- `> ln -s /opt/cep/login/cshrc .cshrc`.
- Log out and login again; you should see a welcome message (and no errors...).

bash

If you have chosen for the `bash` shell, you do as follows:

- Log in
- `> ln -s /opt/cep/login/bashrc .bashrc`
- `> ln -s /opt/cep/login/profile .profile`
- Log out and login again; you should see a welcome message (and no errors...).

How to transform existing accounts?

To use the LLE in an existing account, rename your existing `.cshrc`, or `.profile` and `.bashrc`, in your `$HOME` and follow the instructions given above.

The LLE scripts

Some of the details are presented here.

What is $APS_LOCAL ?

The root directory for the scripts is provided in environment variable $APS_LOCAL, whose value is set in the `.cshrc` and `.profile` scripts. The actual value is:

- CEP3: `/opt/cep`

Login scripts

In directory `${APS_LOCAL}/login` are a number of default login scripts. The scripts ending with `.bash` are for the `bash` shell, the others for the `(t)csh` shell:

- `cshrc` → Sets APS_LOCAL and calls the other scripts for (t)csh environments
- `bashrc` → Sets APS_LOCAL and calls the other scripts for bash environments
- `profile` → Needed for bash users on Ubuntu systems; also calls `bashrc`.
- `login` → Displays welcome message; no settings
- `setenv` → adds some items to $PATH, sets your prompt, etc.
- `alias` → some default aliases to make life easy
- `setpackages` → script to define packages to initialize at login-time

Users should **NEVER** modify these default scripts. In their $HOME these should be symlinks to the versions in `/opt/cep/login`. Personalization of your login is possible through other scripts like `.myalias` and `.mysetenv` (see below).

Personal command aliasses: .myalias

Personal command aliases can be added to a file `$HOME/.myalias`. When this file exists, the `.cshrc` or `.bashrc` script will read this file after reading the default `${APS_LOCAL}/login/alias(.bash)`.

Personal environment settings: .mysetenv

Personal extensions to $PATH, personal environment variables, personal prompt setting, or overloaded existing environment variables should be done in a file `$HOME/.mysetenv`. If this file exists, the cshrc or bashrc script will read this file.

Package initialisation

Many packages are available from the distribution of the Operating System. Several packages are added lateron, see this page for CEP3 packages. To activate these, environment variables like PATH, LD_LIBRARY_PATH, PYTHONPATH must be set correctly. To help you, we have installed the environment module software (see this section in the CEP3 user documentation.

.mypackages

To initialize the use of installed packages at login time you must create a file `$HOME/.mypackages`. If this file exists, it is used by the LLE script `setpackages`.

The file `$HOME/.mypackages` can look like this example:

```
casa
lofim
```

Provide only one package name per line. For packages that are build daily and that have a version available for all days of the week (LUS, LofIm), you can also specify a day of week in the `.mypackages` file:

```
lofim Tue
```

How to add a personal package

Apart from the systemwide module initialization files provided in directory `$APS_LOCAL/modulefiles`, users can add their personal modulefiles in their `$HOME/modulefiles` and have these run at login time. To add a new, personal, modulefile, act as follows:

- Install the package
- Create a `$HOME/modulefiles/<package>/<modulefile>` environment module script (e.g., adding the installation directory to your $PATH). See this manula for writing modulefiles yourself.
- Add <package> to the list of packages in file `$HOME/.mypackages`

Starting X environment

To start up an X environment you have to make sure that

- The files `$HOME/.xinitrc` and `$HOME/.xsession` are removed

Determine the colordepth that you need (8, 16, 24 bit display) and type:

```
  startx -- :1 -depth <colordepth>
```

This should start your X environment at the proper colordepth. This will create an additional X Server

next to the one you are already running. You can access this with Alt-F8 or Cntl-Alt-F8. The F7 variant will give you back your normal X.

Due to the large latency and largte bandwidth required for X-traffic, it is advisable to connect to the CEP systems with the NX-client on your system. See this page for more info.

Help!

If you need help, or have questions, or want to give any other comments, contact Arno Schoenmakers or Reinoud Bokhorst.

New do<xxxx>-files can be added at any time if you have a new package that should be available systemwide. Contact Arno Schoenmakers or Reinoud Bokhorst in this case.