# 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.

Make sure that possibly existing files \$HOME/.login, \$HOME/.setenv and \$HOME/.alias that you

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still want to use at login time are renamed to \$HOME/.mylogin, \$HOME/.mysetenv, \$HOME/.myalias.

## 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, Loflm), 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 \$H0ME/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

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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.

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