

# 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.

## Login scripts

In directory `/opt/cep/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
- `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 aliases: `.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.

## 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 `$HOME/modulefiles/<package>/<modulefile>` environment module script (e.g., adding the installation directory to your `$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.

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