# The Lofar Login Environment (LLE)

This page describes the standard login environment for new users on the LOFAR cluster nodes. It can also be applied to accounts at the WRST site and on the Dwingeloo Linux systems.

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 and go to your (empty) $HOME directory
- `> cp /opt/login/cshrc .cshrc`
- Log out and login again; you should see a welcome message.

### bash

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

- Log in and go to your (empty) $HOME directory
- `> cp /opt/login/bashrc .bashrc`
- Log out and login again; you should see a welcome message.

## How to transform existing accounts?

To use the LLE in an existing account, copy the file ${APS_LOCAL}/cshrc to $HOME/.cshrc, or ${APS_LOCAL}/bashrc to $HOME/.bashrc, depending on the used shell (mind the leading 'dot'!).

Do **not** modify this file in your $HOME. Make sure that files such as $HOME/.login, $HOME/.setenv and $HOME/.alias are renamed (to, e.g., $HOME/.mysetenv and $HOME/.myalias), or removed, if you want to use the LLE environment.

# 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 or bashrc scripts. The actual value depends on your location:

- CEP processing cluster: `/opt`
- lioffen nodes: `/app`
- WSRT: `/wop25_1/aps_local`
- D'loo: `/local`

## 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
- `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 at this location!

## 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: .mypackages

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

In the directory `${APS_LOCAL}/scripts` you will find available package initialization scripts, named like do<package> (e.g., `doCasacore`, `doPyrap`). Whenever you add a package to the file $HOME/.mypackages, the associated script in $APS_LOCAL/scripts will be `source`'d.

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

```
Casacore
doPyrap
```

The packages can be on one line or on multiple lines. Also note the use of <package> and do<package>; both are accepted. If an initialization script cannot be found, it will be reported to the user.

## How to add a personal package

Apart from the systemwide do<package> files provided in directory $APS_LOCAL/scripts, users can add their personal do<package> files in their $HOME and have these run at login time. If there is a do<package> file both in $HOME and in $APS_LOCAL/scripts, the version in $HOME has preference and will be executed. This can be used to test a different version of a package, etc... To add a new, personal, package, act as follows:

- Install the package
- Create a $HOME/do<package> initialization script (e.g., adding the installation directory to your $PATH)
- Add <package> to the list of packages in file $HOME/.mypackages

# How to modify existing accounts

There are a few basic steps to perform to use the LLE in existing accounts:

- Make `tcsh` your default login shell; your system manager should be able to set this for you. Ask him to replace an existing $HOME/.cshrc with the default `cshrc` file of the Linux Login Environment.
- Rename or remove possibly existing $HOME/.login file.

This will give you the bare environment. To add package activation do the following:

- Copy $APS_LOCAL/login/setpackages to $HOME/.setpackages, and then
- Edit this file to setup package activation (see above).
- Try to login and see if the login goes well.

# Starting X environment

To start up your 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.

# Help!

If you need help, or have questions, or want to give any other comments, contact Arno Schoenmakers, Adriaan Renting or Henk Vosmeijer.

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

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