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 Linux 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 that we have tested on various Linux-based hosts at ASTRON, WSRT and LOFAR (RCG).

Use (t)csh!

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

The LLE scripts

In all environments where we use the LLE, we use the same scripts and directory structure.

What is $APS_LOCAL ?

The root directory for the scripts is provided in environment variable $APS_LOCAL, whose value is set in one of the scripts (`cshrc`). The actual value depends on your location:

- WSRT: `/wop25_1/aps_local`
- D'loo: `/local`
- CEP: `/app`

Login scripts

In the site dependent directory $APS_LOCAL/`login` are a number of default login scripts:

- `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!

Transform existing accounts

To use the LLE in an existing account, copy the file $APS_LOCAL/cshrc to $HOME/.cshrc (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 or removed if you want to have the standard LLE environment.

New accounts

When getting a new account, your $HOME should already contain the .cshrc-file. Do **not** modify this file in your $HOME.

The other files are used by the cshrc-script, so don't copy these. Using the files from $APS_LOCAL/login makes it easier for us and you to stay updated whenever we change these files.

Personal command aliasses: .myalias

Personal command aliases can be added to a file $HOME/.myalias; The cshrc-script will source this file after the default $APS_LOCAL/login/alias, when it is found.

Personal environment settings: .mysetenv

Personal extensions to $PATH, personal environment variables, or overloaded existing environment variables can be added to a file $HOME/.mysetenv. The cshrc-script will source this file after all other files if it is found.

Package initialisation: .mypackages

To initialize the use of installed packages on your system you must create a file $HOME/.mypackages. It is used by the default script setpackages in $APS_LOCAL.

In the directory $APS_LOCAL/scripts you will find a list of available package initialization scripts do<package> (e.g., doAIPS, doPython). 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:

```
AIPS++
doPyrap
Tools Python doAIPS
```

The packages do not need to be on one line, nor does the file need to have only one package per line.

Also note the use of `<package>` and `do<package>`; both are accepted. If a initialization script cannot be found, it will be reported.

To find out which packages should have been initialized, type

```
packages
```

This is an alias for `echo $packages` and should give the list of packages as you defined in `$HOME/.mypackages`, and from packages added manually later on.

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

Overview of packages and package initialization scripts

These are the files that you can find in `$APS_LOCAL/scripts` and their useage. Not all files may be present at all locations, as some only have use at a specific site (e.g., `doTMS` is only useful at the WSRT).

doAIPS [AIPS]

Sources the classic AIPS initialization file (`/aips/LOGIN.CSH`) so classic AIPS can be run. This also requires that are member of the group `aipsgrp`, otherwise you will not have access to AIPS-defined DATA disks. Contact Stefanie Muhle at JIVE for details about how to set up an AIPS session for the first time.

doAIPS++ [AIPS++]

Calls doStableAIPS++ (see below) for the moment. Can be used (but only effective at WSRT, currently) to initialize a host-dependent version of AIPS++. Contact Arno Schoenmakers if you want to use AIPS++.

doCuisine [Cuisine]

Initialization script to use the Cuisine pipeline scripts. Maintained by Adriaan Renting. Contact him if

you plan on using this.

doGIPSY [GIPSY]

Initialization script for the GIPSY package; for GIPSY we have a 32- and 64-bit version. The architecture of your machine deteremines which is activated.

doIRAF [IRAF]

Initializes the IRAF data reduction package (optical/IR data). It will check if you are a first time user and run `mkiraf` if you are.

doKarma [Karma]

Initialization script of Karma Miriad visualization tools.

doMiriad4 [Miriad4]

Version 4 of the BIMA/CARMA Miriad version.

doMiriad4p [Miriad4p]

Optimized version 4 provided by John Romein. Works only on the Adam cluster. Contact Adriaan Renting if you are interested in using this.

doOosterloo [Oosterloo]

Script to create an environment that can execute most of Tom Oosterloo's personal doXXXX scripts most notably the doWsrtMiriad and related scripts.

doPipeline [Pipeline]

Initialization script to use the First-look WSRT data reduction pipeline. Uses Cuisine, Python, WsrtMiriad, WsrtAIPS++. Maintained by Adriaan Renting. Contact him if you plan on using this.

doPython [Python]

Initialization script to use the Python Pipeline environment with iPython and PyLab. Maintained by Adriaan Renting. Contact him if you plan on using this.

doROOT [ROOT]

Initialization script to use the ROOT package.

doTMS [TMS]

Sets the environment for TMS developers/users (only effective at the WSRT site). Contact Arno Schoenmakers for more information.

doWsrtAIPS++/doStableAIPS++ [WsrtAIPS++/StableAIPS++]

Initialization script for use of an old WSRT AIPS++ build (V19.1488). Works for Suse 8 and 9 32-bit systems, only.

doWsrtMiriad [WsrtMiriad]

Version ATNF maintained by Tom Oosterloo. Calls doOosterloo and a scripts in Oosterloo's environment to initialize the wsrtMiriad version. Contact Tom Oosterloo or Rafaella Morganti if you plan to use Miriad.

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.