# Available packages on the LOFAR offline clusternodes

This page gives an overview of available packages, other than the 'standard' ones distributed as part of the Linux distribution, and how to initialize these. See the Login environment page for instructions on activating packages at login time.

## Packages

Package	Description	Initialize	Update frequency	Comments
Casa	Browser, viewer	use Casa	infrequent	NRAO development
GDL	Gnu data language	use GDL	infrequent	Contains GDL, GSL, PLPLot
grid				
hdf5	library	-	infrequent	Used by other packs, now 1.8.2
hdf5viewer		-	infrequent	
LofIm	Lofar Imaging	use LofIm	daily	Follow this link
pipeline				
Pythonlibs	Several useful Python modules	use Pythonlibs	infrequent	Follow this link
wcslib	library	-	infrequent	Used by other packs, now 4.3

## **Descriptions of Packages**

### Casa

This is the NRAO developped package that provides Graphical interfaces like those available in the old AIPS++ packages. It provides the following useful tools (see directory /opt/Casa/bin):

- casabrowser  $\rightarrow$  A table browser (much like the old glish-based browser)
- casaplotms  $\rightarrow$  A tool to make 2-D plots of data in a MS
- casaviewer  $\rightarrow$  Visualizer
- casapy  $\rightarrow$  Casa's Python interface.

Extensive documentation can be found on this NRAO-hosted webpage.

#### LofIm

The package LofIm (Lofar Imaging) consists of the following previously known subpackages:

- casacore
- casarest
- pyrap
- LOFAR
- ASKAPsoft

All these are build every night in a single go, with source code extracted from each package's source repository. Activating the LofIm package ensures that you will have a consistent set of libraries and executables.

To activate it on commandline use:

> use LofIm

This will activate the version that was build last night. It will add all settings needed to use the subpackages toyour PATH, PYTHONPATH and LD\_LIBRARY\_PATH environment variables.

As all of the individual subpackages are in a development phase, we **cannot** guarantee that each nightly build is bugfree, or even that is has succeeded. Therefore, we keep a buffer of previous builds for a week. This ensures that if a nightly build has failed, you can use a (working) previous build. To activate a previous build on commandline use:

```
> use LofIm <day> (e.g., use LofIm Wed)
```

If the problem that caused a build to fail has not been solved in a week's time, you will not be able to use the package until it has been fixed. In due time we will implement a system with a release policy, that will enable you to use 'stable' versions of these libraries.

### **Pythonlibs**

We have made available several useful Python modules. These can be activated with a single command:

#### > use Pythonlibs

(see this page for information on how to activate at login time). The Pythonlibs currently contain:

- Numpy  $\rightarrow$  version 1.3.0
- SciPy  $\rightarrow$  version 0.7.1
- matplotlib  $\rightarrow$  version 0.99.1.1
- PyFits → version 2.2.2
- PyEphem → version 3.7.3.4
- **PyFFTW**  $\rightarrow$  version 0.2
- PyTables → version 2.1.2
- H5Py  $\rightarrow$  Version 1.2.1

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