

Installing LOFAR Software on a fresh Ubuntu 12.04

This are my private, unedited notes on installing the LOFAR Software on a fresh Ubuntu 12.04. So they don't contain step by step instructions that will work for you, but they still may contain useful information for you.

(9.10.2013 Andreas Horneffer)

(NB you can also get casacore/pyrap packages from

<https://launchpad.net/~gijzelaar/+archive/aartfaac> to save building them yourself - JDS 2013-10-10.)

```
##### Pakete:
libgtkmm-2.4-dev python-matplotlib python-pyfits libatlas-base-dev
mpi-default-bin mpi-default-dev libfreetype6-dev python-setuptools
libxml2-dev libpng12-dev libcfitsio3 libcfitsio3-dev libboost-all-dev
autoconf autoconf-archive autogen automake binutils-dev cmake cmake-curses-
gui
cvs doxygen flex gfortran git guile-1.8-dev ipython libblas-dev libblitz0-
dev
libboost-all-dev libboost-dev libfftw3-dev libfftw3-doc libgfortran3
libglib2.0-dev libgsl0-dev liblapack-dev liblog4cxx10 liblog4cxx10-dev
libopenmpi-dev libpqxx3-dev libx11-dev mgdiff mpi-default-dev patch pgplot5
python-dev python-numeric python-numpy python-scipy scons subversion-tools
swig bison libbison-dev
tcl tcl-dev tk tk-dev tk8.5-dev tcl8.5-dev
libhdf5-dev (oder: libhdf5-serial-1.8.4 libhdf5-serial-dev)
### "libhdf5-serial" is needed for DAL, it doesn't work with "libhdf5-
openmpi"
wcslib-dev liblog4cplus-dev liblog4cplus-1.0-4 cython
###for parmdbplot:
python-sip python-qt4
```

```
##### LOFAR software:
```

```
Download packages:
```

```
#####
```

```
mkdir Downloads
```

```
cd Downloads
```

```
wget ftp://ftp.atnf.csiro.au/pub/software/asap/data/asap_data.tar.bz2
```

```
Download and Build Casacore:
```

```
#####
```

```
tar -xjvf ../Downloads/asap_data.tar.bz2
```

```
(This creates the "data" subdirectory)
```

```
mkdir BuildDir/casacore
```

```
cd BuildDir/casacore
svn co http://casacore.googlecode.com/svn/trunk source
mkdir -p build/opt
cd build/opt
cmake -DBUILD_TESTING=NO -DCMAKE_INSTALL_PREFIX=/opt/lofar-stuff -
DUSE_FFTW3=Yes -DUSE_THREADS=YES -DUSE_HDF5=YES -DUSE_OPENMP=YES -
DDATA_DIR=/opt/lofar-stuff/data ../../source
make -j12
make install
```

Install Casacore data:

```
#####
cd BuildDir/..
tar -xjvf Download/asap_data.tar.bz2
```

Download and Build pyrap

```
#####
mkdir /cluster/lofar/BuildDir/pyrap
cd /cluster/lofar/BuildDir/pyrap
svn co http://pyrap.googlecode.com/svn/trunk dev-source
export LOFAR_STUFF_ROOT="/opt/lofar-stuff/"
export PATH="${PATH}:${LOFAR_STUFF_ROOT}/bin/"
export LD_LIBRARY_PATH="${LOFAR_STUFF_ROOT}/lib/"
export PYTHONPATH="${LOFAR_STUFF_ROOT}/lib/python/"
ln -s /opt/soft/lofar-stuff/lib/ /opt/soft/lofar-stuff/lib64
cd dev-source/
./batchbuild-trunk.py --casacore-root=/opt/lofar-stuff --
prefix=/opt/lofar-stuff --python-prefix=/opt/lofar-stuff/lib/python
```

Download and Build casarest

```
#####
mkdir /cluster/lofar/BuildDir/casarest
cd /cluster/lofar/BuildDir/casarest
svn co https://svn.astron.nl/casarest/trunk/casarest source
mkdir build
cd build
cmake -DCASACORE_ROOT_DIR=/opt/lofar-stuff -DBUILD_ALL=1 -
DCMAKE_INSTALL_PREFIX:PATH=/opt/lofar-stuff ../source
make -j12
make install
```

Download and Build the LOFAR Software

```
#####
mkdir /cluster/lofar/BuildDir/lofarsoft
cd /cluster/lofar/BuildDir/lofarsoft
svn checkout --ignore-externals https://svn.astron.nl/LOFAR/trunk LOFAR
username: lofar-guest
password: lofar-guest
```

```
mkdir -p build/gnu_opt
cd build/gnu_opt
cmake -DCASACORE_ROOT_DIR=/opt/lofar-stuff/ -DBUILD_SHARED_LIBS=ON -
DUSE_OPENMP=ON -DBUILD_PACKAGES="ParmDB Calibration DP3 Pipeline MSLoFar
LoFarFT" -DCMAKE_INSTALL_PREFIX:PATH=/opt/lofar-stuff ../../LOFAR/
make -j12
make install
```

When this all worked you can set up your environmen with the following lines:

For bash/zsh:

```
if test -n "$PYTHONPATH" ; then
    export PYTHONPATH=${PYTHONPATH}:/opt/lofar-stuff/lib/python:/opt/lofar-
stuff/lib/python2.7/site-packages/
else
    export PYTHONPATH=/opt/lofar-stuff/lib/python:/opt/lofar-
stuff/lib/python2.7/site-packages/
fi

source /opt/lofar-stuff/lofarinit.sh
```

For (t)csh:

```
if ($?PYTHONPATH) then
    setenv PYTHONPATH ${PYTHONPATH}:/opt/lofar-stuff/lib/python:/opt/lofar-
stuff/lib/python2.7/site-packages/
else
    setenv PYTHONPATH /opt/lofar-stuff/lib/python:/opt/lofar-
stuff/lib/python2.7/site-packages/
endif

source /opt/lofar-stuff/lofarinit.csh
```

From:

<https://www.astron.nl/lofarwiki/> - **LOFAR Wiki**

Permanent link:

https://www.astron.nl/lofarwiki/doku.php?id=public:user_software:ubuntu_12_4&rev=1435829525

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