

# User Software :: pyBDSM

<html> <div style="border:2px dashed red; padding: 2em;"><h2>WARNING:</h2>  
<strong>PyBDSM cannot be found in LUS repository any more (10-02-2014)</strong>. The  
documentation of PyBDSM can be found <a  
href="http://dl.dropboxusercontent.com/u/1948170/html/installation.html">here</a></div> </html>

## External dependencies

The following packages are required in order to build pyBDSM:

- Python
- NumPy
- WCSLIB
- CFITSIO
- port3 – this is part of pyBDSM now
- minpack – this is part of pyBDSM now

The following packages are required in order to run pyBDSM:

- SciPy
- [pyfits](#)
- **fortran stuff (to make faster)**
- f2py

## Installation procedure

1. Check out source code from the LUS repository

```
svn co http://usg.lofar.org/svn/code/trunk lofarsoft
```

The components of the source code are organized as follows:

```
lofarsoft
|-- src
    |-- BDSM
        |-- doc                .. Documentation directory
        |-- implement          .. Source code compiled into library and
executables
        |   |-- bdsm          .. Original Fortran BDSM
        |   |-- minpack
        |   |-- port3
        |   |-- pybdsim       .. C-based Boost.Python wrappers
    |-- scripts               .. Python scripts
```

- fortran and c stuff to be compiled into libraries are in `implement/pybdsim`
- `anaamika` is in `implement/bdsim`
- `port3` etc are in `implement`

## 2. Run the bootstrap script in the build directory:

```
cd build
./bootstrap
```

3. Build *pyBDSM*:

```
make bdsm
```

This will also go through the list of required external packages and check whether they are installed; if this is not the case, the dependencies will be resolved before continuing with *pyBDSM* itself.

The following components (libraries and application programs) will be build:

- *\_py2fbdsm* – Write *pyBDSM* output to *fBDSM* format
- *\_pytesselate* – Fortran implementation of Tesselation
- *\_cbdsm* – Main python module to be imported

4. Installation of *pyBDSM*

Upon completion of the build, the generated components will be installed into the following locations:

```
.                .. $LOFARSOFT
|-- release
|   |-- bin      .. $PATH
|   |-- include
|   |-- lib
|       |-- python .. $PYTHONPATH
|           |-- _cbdsm.so
|           |-- bdsm .. Installation location of Python
scripts
|           |-- image.py
|
```

- executables are in *release/bin* and other stuff are in *release/lib*, *release/includes* and *release/lib/python* (pythonpath)
- doc is in *doc*

## Troubleshooting

```
>>> import bdsm
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
  File "/home/lars/usg/code/trunk/release/lib/python/bdsm/__init__.py", line
9, in <module>
    from preprocess import Op_preprocess
  File "/home/lars/usg/code/trunk/release/lib/python/bdsm/preprocess.py",
line 8, in <module>
    import _cbdsm
ImportError: dynamic module does not define init function (init_cbdsbm)
```

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