



FMIPROT

Finnish Meteorological Institute

Image Processing Toolbox

Quick guide for Installation from source code
using Anaconda

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Installation

FMIPROT is developed in Python 2.7 and available as source code and binary for some distributions (latest version only available as source code). For development, Python 2.7 and various libraries are required. Those libraries are **Tkinter** and the list of libraries with the version numbers in “**requirements.txt**” in the code repository.

The libraries can be installed on the operation system with other libraries. This is not a good practice because one may need to overwrite the existing libraries for FMIPROT to work, which will cause problems in the other programs and/or libraries and vice versa. It will also require one to set up Python 2 as default interpreter, while Python 3 may be required for other programs one is using. To overcome this potential problem, we will create a virtual environment and manage libraries for FMIPROT, using “Anaconda.”

In this guide, “Anaconda” is used as the virtual environment and package manager for the libraries. Instead of “Anaconda,” “pip” and “virtualenv” combination and variants can also be used.

More information about virtual environments can be found at <https://realpython.com/python-virtual-environments-a-primer/> (optional)



Installation

Anaconda does not only manage Python libraries, but also programs like Python, git, R too. Everything needed for FMIPROT is available in Anaconda Cloud and it is cross platform, so very easy to set up for Linux, Windows or MacOS.

Step by step installation:

- 1) If you don't have Anaconda, download and install it from <https://www.anaconda.com/distribution/> . Anaconda 3 or 2, or installation options does not matter.
- 2) Open terminal/command prompt with Anaconda:
 - In Windows, search for Anaconda Prompt
 - In Linux, run a Terminal
- 3) Create a virtual environment with Python 2.7 and Git:
 - `conda create -n fmiprot python=2.7 git`



Installation

4) Activate the virtual environment

- `conda activate fmiprot`

5) Download FMIPROT using Git:

- `git clone https://github.com/tanisc/FMIPROT.git`

6) Change directory to FMIPROT:

- `cd FMIPROT`

7) Add Anaconda cloud sources for libraries:

- `conda config --add channels conda-forge`
- `conda config --add channels alges`

8) Install libraries using requirements file

- In linux, `conda install --file requirements_linux-64.txt`
- In Windows, `conda install --file requirements_win-64.txt`



Run FMIPROT

\$ -> Command in Linux terminal
C:\> -> Command in Windows command prompt
my_working_dir -> The directory you would like to work in. It can be anywhere.

Activate the virtual environment if it is not active already:

- `conda activate fmiprot`

Run FMIPROT:

- `python src/fmiprot.py`



Settings

- 1) Always set up your storage directories for convenience. (e.g. disk space problems)
- 2) Setup your web proxy, if any.

