FFA23 school - OPAL installation

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1 OPAL

The OPAL source code, examples, manual and documentation can be found on the OPAL GitLab. The simplest way to install OPAL on your machine is to download the pre-compiled binaries. **If you have any questions or problems installing please email me before the workshop.**

Of course, OPAL can also be built from source but this is a bit more involved as there are a few dependencies. If you would like to edit the source code and build from source, there are instructions on GitLab.

2 Install on Linux

Instructions on installing on Linux can be found here.

3 Install on MacOS

Instructions on installing on Mac can be found here.

4 Install on Windows

To install on Windows you will need a linux virtual machine. I use the Windows Subsystem for Linux. By default WSL has very little installed but you can install python, compilers etc using the package manager. Once WSL is installed follow the instructions for installing OPAL on linux.

5 Python

For the tutorial you will also need a python3 installed. Most linux systems will already have a python3 interpreter, you can check which version of python you have with:

```
python3 --version
```

If you do not have a python3 interpreter you can install one with:

```
sudo apt-get install python3.8 python3-pip
```

You will also need some common python packages for running the OPAL analysis scripts for the tutorial. Best practice for installing packages is to use a virtual environment. You can create a virtual environment with:

```
python -m venv /path/to/new/virtual/environment/venv
```

Activate the vertual environment:

```
source <path_to_venv>/bin/activate
```

Then you can update pip and then install the required packages with pip:

```
pip install --upgarde pip
pip install matplotlib numpy pandas scipy
```

You can deactivate the environment by entering:

```
deactivate
```

(Optional) If you would like to manage multiple versions of python on linux, pyvenv is useful.

5.1 MacOS

For MacOS you can install python using the homebrew package manager and follow the same steps as above to make a virtual environment.