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**WRF4G** can be installed in any Linux Computer. It provides the services needed to prepare, run and monitor experiments, it is able to manage many computing resources and use them to run different simulations of a WRF experiment at the same time.

Although in the following examples we will use the same computer to manage and run the experiments, scientists generally use a computer to prepare and manage the experiments (where WRF4G has to be installed) and different computing resources to run them (PBS or SGE Clusters, HPC infrastructures, stand-alone servers). We call **User Interface (UI)** to the computer where WRF4G is installed and **Computing Resources (CR)** to the nodes where a WRF experiment can run. In the following experiments the computer where the UI role is installed will act as CR.

## Required Software

WRF4G needs having the following software installed on both UI and CR:

- **x86\_64 Linux**
- **Python**, version  $\geq 2.4$  and  $< 3.0$ .

## Platform Notes

WRF4G has only been run in 64bits platforms and it currently has been tested under the following O.S.:

- **Ubuntu 10.04 and 11.04**: Issues not known.
- **Centos 5 and 6**: Issues not known.
- **Debian 6.0**: Issues not known.

## Installation

Download and unpack the distribution file [?WRF4G.tar.gz](#) into the installation directory, for example your \$HOME directory.

```
[user@mycomputer~]$ cd $WRF4G_INSTALL_PATH (i.e cd $HOME)
[user@mycomputer~]$ wget www.meteo.unican.es/work/WRF4G.tar.gz
[user@mycomputer~]$ tar xzvf WRF4G.tar.gz
```

Setup the WRF4G user environment. (To avoid typing the export command every time you want to use WRF4G, it is advisable to copy these lines in \$HOME/.bashrc)

```
[user@mycomputer~]$ export WRF4G_LOCATION=$WRF4G_INSTALL_PATH/WRF4G
[user@mycomputer~]$ export PATH=$WRF4G_LOCATION/bin:$PATH
```

The installation process provides the UI with:

- A set of scripts that allows to prepare, submit and monitor experiments.
- The WRF4G framework. This framework is a set of daemons/services that manage:
  - The Computing Resources where WRF is going to run.
  - The database where the experiment information and status (realization, chunks, jobs) is stored.

## Verifying installation

- Start the WRF4G Framework. This command will start the services needed by WRF4G to run.

```
[user@mycomputer~]$ wrf4g_framework start
```

- List the computing resources available.

```
[user@mycomputer~]$ wrf4g_resources
HID PRI OS ARCH MHZ %CPU MEM(F/T) DISK(F/T) NODES(U/F/T) LRMS HOSTNAME
0 1 GNU/Linux2.6.32 x86_64 3000 0 1212588M/3891840M 136155G/225125G 0/1/1 FORK mycomputer
```

You should now move to [the WRF4G tutorial](#)

## Problems

If you find any problem, please [send us a ticket!](#)