



**Barcelona
Supercomputing
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Programming Distributed Computing Platforms with COMPSs

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Set-up: alternative 1 - with docker container (linux/macOS)

1) Install docker:

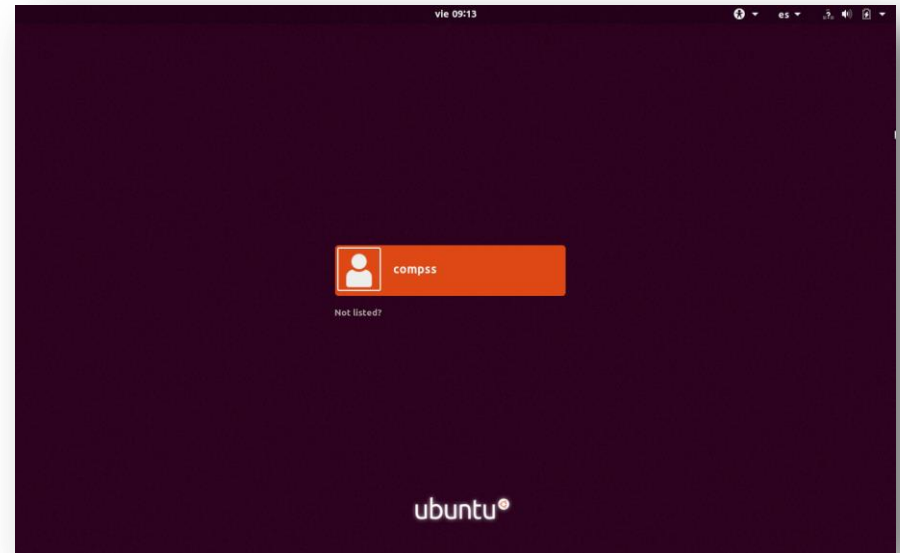
- Go to <https://docs.docker.com/engine/install/> and follow the instructions for your platform
- Linux: If your Linux distribution is old, the docker version in the system package will be old and has several bugs. Please upgrade it following the instructions in the web.

2) Get COMPSs docker image:

- **docker pull compss/compss-tutorial:3.1**

Set-up: alternative 2 - using virtual appliance (windows)





1. Install VirtualBox
 - Download from <https://www.virtualbox.org>
2. Download the tutorial VM.
 - <https://comps.bsc.es/releases/vms/Tutorial-base.ova>
3. Start the VM image
 - Start VirtualBox
 - Import the COMPSs VM image
 - Start COMPSs VM image
 - user: **compss**
 - password: **compss2021**
4. Install tutorial data:
 - `$ sudo rm -rf tutorial_apps`
 - `$./install_tutorial.sh 3.1`



PyCOMPSs and Jupyter Notebook in Docker

- Install pycompss-player:
 - Linux: `$ sudo python3 -m pip install pycompss-cli`
 - Mac-os: `$ pip install pycompss-cli`
- Download example applications:
 - `$ git clone https://github.com/bsc-wdc/tutorial_apps.git`
 - `$ cd tutorial_apps`
- Initialize a COMPSs docker environment:
 - `$ pycompss init -n docker-tutorial docker -i compss/compss-tutorial:3.1`
- Start the monitor
 - `$ pycompss monitor start`
- Open a web browser with the address: <https://localhost:8080/compss-monitor>
- Start Jupyter-notebook
 - `$ pycompss jupyter`
- Open a web browser with the address: <http://172.17.0.2:8888>

Further Information

- Project page: <http://www.bsc.es/compss>
 - Virtual Appliance for testing & sample applications
 - Tutorials
- Documentation: <https://compss-doc.readthedocs.org>
- Source Code
 -  <https://github.com/bsc-wdc/compss>
- Docker Image
 -  <https://hub.docker.com/r/compss/compss/>
- Applications
 -  <https://github.com/bsc-wdc/apps>
 -  <https://github.com/bsc-wdc/dislib>

PyCOMPSs from sources - PIP install

- Release of PyCOMPSs pip package to enable automatic installation
 - **pip install pycompss -v**
 - **source ~/.bashrc**
- Documentation for the package
 - <https://pypi.python.org/pypi/pycompss/3.1/>



Installation from sources

- Source Code
 - https://compss-doc.readthedocs.io/en/3.1/Sections/01_Installation.html#
- Supercomputers packages
 - http://compss.bsc.es/repo/sc/stable/COMPSS_3.1.tar.gz
 - Untar and `./install <location>`
 - Configure `cfg` file