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Centro Nacional de Supercomputación



Programming Distributed Computing Platforms with COMPSs

Workflows & Distributed Computing Group

25-26/01/2022

Barcelona

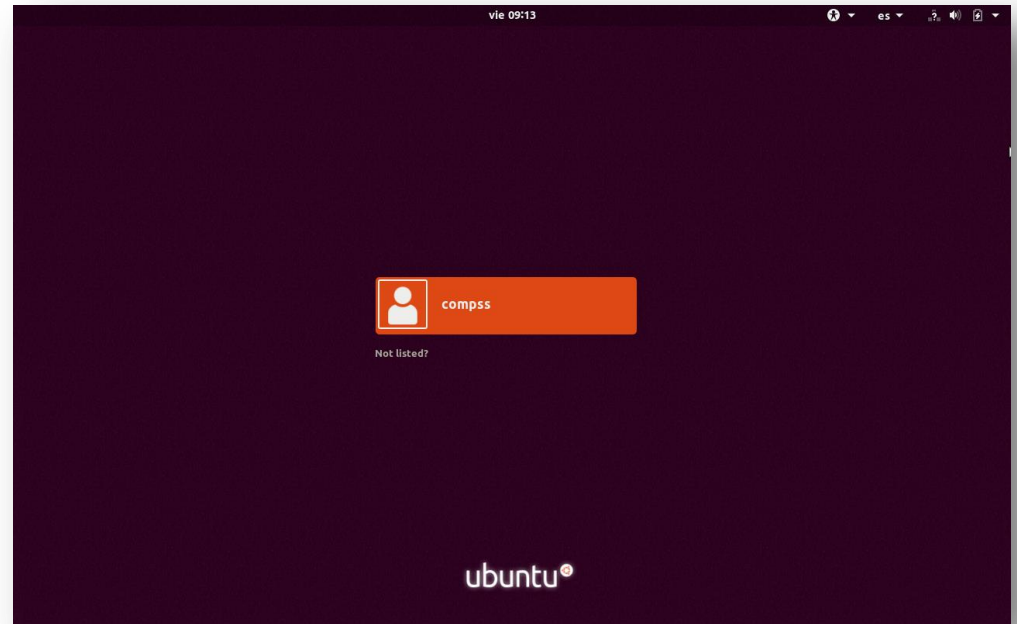
Python Hands-on (Jupyter-notebook)



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PyCOMPSs within VM

- Open VirtualBox
- Start the Virtual Machine
 - User: **compss**
 - Password: **compss2021**
- Open a console



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:2.10`
- Start the monitor
 - `$ pycompss monitor start`
- Start Jupyter-notebook
 - `$ pycompss jupyter`
- Open a web browser with the address: <http://172.17.0.2:8888>

Using the VM
`$ sudo rm -rf tutorial_apps`
`$./install_tutorial.sh`

Python Hands-on demos

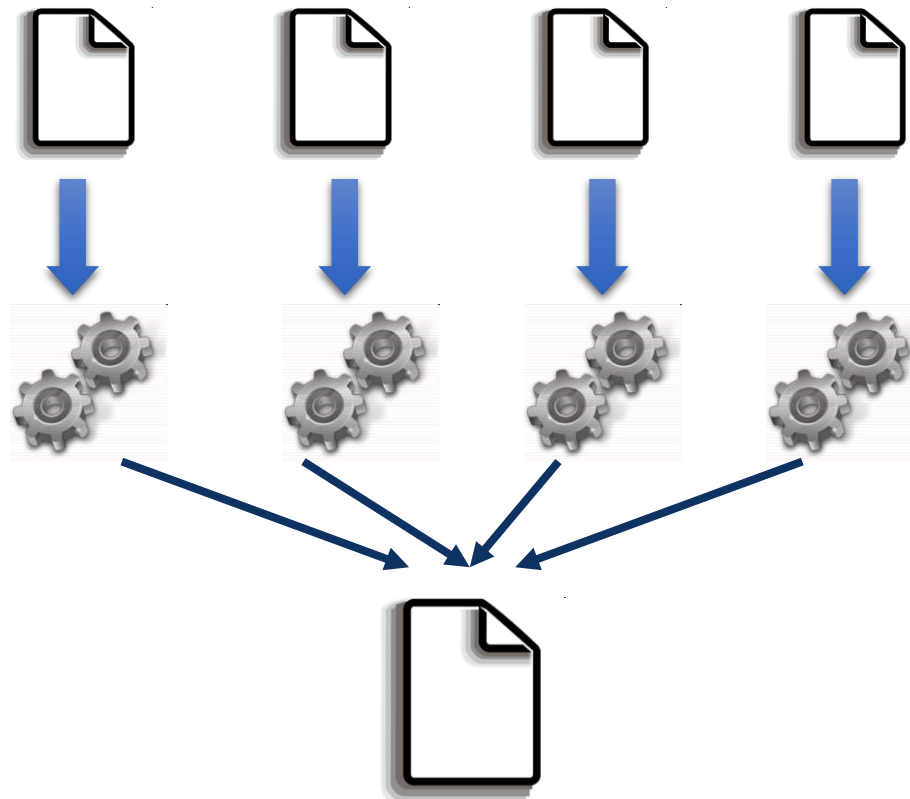


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Wordcount Exercise

- Counting words of a set of documents
- Parallelization
 - Phase 1: Count words of a set of documents
 - Phase 2 : Merge results



Stop the Docker environment

- Stop Jupyter-notebook
 - Press **CTRL+C**
- Stop the monitor
 - **\$ pycompss monitor stop**
- Remove the COMPSs docker environment
 - **\$ pycompss env remove docker-tutorial**



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EXCELENCIA
SEVERO
OCHOA

THANK YOU!

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