



**Barcelona
Supercomputing
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Centro Nacional de Supercomputación



Programming Distributed Computing Platforms with COMPSs

Workflows & Distributed Computing Group

24-25/01/2023

Barcelona

Final notes







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Take-away messages

- Sequential programming approach (Java, Python, C++)
- Parallelization at task level
- Transparent data management and remote execution
- Easily integrate legacy applications (binaries, MPI)
- Can operate on different infrastructures:
 - Cluster
 - Grid
 - Cloud (Public/Private)
 - Containers
- Dislib for Machine learning on top of PyCOMPSs

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>

Installation

- 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

PyCOMPSs - 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/>





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EXCELENCIA
SEVERO
OCHOA

THANK YOU!

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