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Programming Distributed Computing Platforms with COMPSs

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Workflows & Distributed Computing Group

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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

Further Information

- Project page: <http://www.bsc.es/compss>
 - Documentation
 - Virtual Appliance for testing & sample applications
 - Tutorials
- Source Code
 -  <https://github.com/bsc-wdc/compss>
- Docker Image
 -  <https://hub.docker.com/r/compss/compss-ubuntu16/>
- Applications
 -  <https://github.com/bsc-wdc/apps>
 -  <https://github.com/bsc-wdc/dislib>

Installation

- Source Code
 - <https://github.com/bsc-wdc/compass/blob/stable/README.md>
- DEB and RPM based packages
 - http://compass.bsc.es/releases/repofiles/repo_deb_ubuntu_x86-64.list
 - http://compass.bsc.es/releases/repofiles/repo_deb_debian_x86_64.list
 - http://compass.bsc.es/releases/repofiles/repo_rpm_centos_x86-64.repo
 - http://compass.bsc.es/repo/rpms/stable/suse/x86_64/
- Supercomputers packages
 - http://compass.bsc.es/repo/sc/stable/COMPSSs_2.4.tar.gz
 - Untar and ./install <location>
 - Configure cfg file

PyCOMPSs - PIP install

- Release of PyCOMPSs pip package to enable automatic installation with "pip install".
- Available since January 2017
 - <https://pypi.python.org/pypi/pycompss/2.4/>
- Documentation for the package



The screenshot shows the PyPI project page for pycompss 2.4. At the top, there is a search bar and navigation links for Help, Donate, Log in, and Register. The main header displays "pycompss 2.4" with a "Latest version" badge and a "Last released: Nov 19, 2018" timestamp. Below the header, there is a "pip install pycompss" button. The page is divided into two columns. The left column contains a "Navigation" menu with links for "Project description", "Release history", and "Download files", and a "Project links" section with a "Homepage" link. The right column contains a "Project description" section with a placeholder for the description text and an "Overview" section with a placeholder for the overview text. At the bottom left, there is a "Statistics" section.



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THANK YOU!

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