

PATC: Programming Distributed Computing Platforms with COMPSs

Objectives

COMPSs is a programming model which is able to exploit the inherent concurrency of sequential applications and execute them in a transparent manner to the application developer in distributed computing platform. This is achieved by annotating part of the codes as tasks, and building at execution a task-dependence graph based on the actual data used consumed/produced by the tasks. The COMPSs runtime is able to schedule the tasks in the computing nodes and take into account facts like data locality and the different nature of the computing nodes in case of heterogeneous platforms. Additionally, recently COMPSs has been enhanced with the possibility of coordinating Web Services as part of the applications. COMPSs supports Java, C/C++ and Python as programming languages.

Requirements

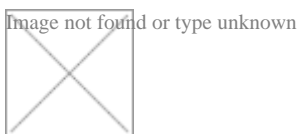
Prerequisites: Programming skills in Java and Python

Learning Outcomes

Learning Outcomes: In the course, the COMPSs syntax, programming methodology and an overview of the runtime internals will be given. The attendees will get a first lesson about programming with COMPSs that will enable them to start programming with this framework.

A hands-on with simple introductory exercises will be also performed. The students who finish this course will be able to develop simple COMPSs applications and to run them both in a local resource and in a distributed platform (initially in a private cloud)

Academic Staff



Course Convener: Rosa M Badia

Lecturers:

- Rosa M Badia
- Javier Conejero
- Jorge Ejarque
- Daniele Lezzi

Materials

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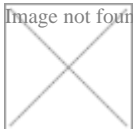
Download the slides [COMPSs Tutorial](#)

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Further information

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**PLEASE BRING YOUR OWN LAPTOP.**

NOTE: PATC courses do not charge fee

Recommended Accomodation:

Please follow [the link](#) for map of some local hotels.

Barcelona Supercomputing Center - Centro Nacional de Supercomputación

Source URL (retrieved on 5 Mayo 2024 - 22:20): <https://www.bsc.es/es/education/training/patc-courses/patc-programming-distributed-computing-platforms-compss-0>