Job Reference

203_ES_CES_RE2

Position

Senior workflow engineer (RE2)

Data de tancament

Diumenge, 31 Març, 2019

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Job title: Senior workflow engineer (RE2)

About BSC

The Barcelona Supercomputing Center - Centro Nacional de Supercomputación (BSC-CNS) is the leading supercomputing center in Spain. It houses MareNostrum, one of the most powerful supercomputers in Europe, and is a hosting member of the PRACE European distributed supercomputing infrastructure. The mission of BSC is to research, develop and manage information technologies in order to facilitate scientific progress. BSC combines HPC service provision and R&D into both computer and computational science (life, earth and engineering sciences) under one roof, and currently has over 500 staff from 44 countries.

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BSC-CNS YouTube Channel

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Context And Mission

In the framework of the Earth-Sciences department, the candidate will substantially improve efficiency and productivity of numerical weather and climate simulation on high-performance computing platforms by supporting the end-to-end workflow of global Earth system modeling in HPC environment. This will be obtained by improving and supporting: scalability of models, tools and data management on state-of-the-art supercomputer systems, usability of models and tools throughout the European HPC eco-system, and exploitability of the huge amount of resulting data. The candidate will develop solutions for cross-cutting HPC challenges, in particular to the weather and climate domain and help to explore and adapt existing models orchestration software within novel platforms.

Key Duties
• Participate actively in the migration from the current workflow manager to the Cylc/Rose suite
• Maintain the operational deployment on different HPC platforms
• Support the users inside and outside the center by adding new features to the existing and new tools
• Cooperate with the other partners within the EC-Earth consortium in the deployment and maintenance of the workflow solution
• Contribute to the Technical Working Group of the EC-Earth Consortium
• Provide guidance to the maintenance and development of the Autosubmit workflow manager
• Disseminate the results obtained through peer-review publications and presentations at conferences
• Facilitate the adoption of the solutions developed through workshops and seminars in and out the department
• Assist the porting of the existing Auto-models to the new Cylc platform
• Maintain the software in the PyPi repository, publishing both source code updates and documentation

Requirements

• Education
  ○ Having a Bachelor in Computer Science, Telecommunications, Physics or related discipline
  ○ Having a Master’s or PhD degrees will be valued

• Essential Knowledge and Professional Experience
  ○ Minimum 3 years of experience in a similar position
  ○ Excellent development skills in Python and experience with UNIX/LINUX environments and scripting languages (bash, …)
  ○ In-depth knowledge of development and execution of scientific applications on parallel computers
  ○ Understanding of HPC computer architecture issues including CPU, accelerators, memory, interconnect, parallel I/O, and computational performance

• Additional Knowledge and Professional Experience
  ○ Experience of version control in a collaborative environment, including SVN or Git
  ○ Previous experience in scientific Python packages (Python Numpy, Scipy, …) will be valued
  ○ Previous experience in a scientific area related to the research position will be appreciated

• Competences
  ○ Capacity to interact and build strong relations with both Earth and Computer scientists
  ○ Fluency in English
  ○ Excellent problem-solving skills with a proactive approach
  ○ Willingness and capacity to learn about new technologies and procedures
  ○ Capacity to work and communicate in an international and interdisciplinary working environment
  ○ Excellent written and verbal communication skills
  ○ Ability to take initiative, prioritize and work under set deadlines and pressure
  ○ Ability to work both independently and within a team
Conditions

- The position will be located at BSC within the Earth Sciences Department
- We offer a full-time contract, a good working environment, a highly stimulating environment with state-of-the-art infrastructure, flexible hours, extensive training plan, tickets restaurant, private health insurance, fully support to the relocation procedures
- Duration: Temporary - 2 years renewable
- Salary: we offer a competitive salary commensurate with the qualifications and experience of the candidate and according to the cost of living in Barcelona
- Starting date: ASAP

Applications Procedure

All applications must include:

- A motivation letter with a statement of interest, including two contacts for further references - Applications without this document will not be considered
- A full CV including contact details

Deadline

The vacancy will remain open until suitable candidate has been hired. Applications will be regularly reviewed and potential candidates will be contacted.

Diversity and Equal Opportunity Employment

BSC-CNS is an equal opportunity employer committed to diversity and inclusion. We are pleased to consider all qualified applicants for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, disability or any other basis protected by applicable state or local law.

Barcelona Supercomputing Center - Centro Nacional de Supercomputación