

[373_24_ES_EMW_RE1](#)

Job Reference

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Position

Workflow Management Software Engineer (RE1)

Data de tancament

Dilluns, 16 Setembre, 2024

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Job title: Workflow Management Software Engineer (RE1)

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, was a founding and hosting member of the former European HPC infrastructure PRACE (Partnership for Advanced Computing in Europe), and is now hosting entity for EuroHPC JU, the Joint Undertaking that leads large-scale investments and HPC provision in Europe. 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 1000 staff from 60 countries.

Look at the BSC experience:

[BSC-CNS YouTube Channel](#)

[Let's stay connected with BSC Folks!](#)

We are particularly interested for this role in the strengths and lived experiences of women and underrepresented groups to help us avoid perpetuating biases and oversights in science and IT research. In instances of equal merit, the incorporation of the under-represented sex will be favoured.

We promote Equity, Diversity and Inclusion, fostering an environment where each and every one of us is appreciated for who we are, regardless of our differences.

If you consider that you do not meet all the requirements, we encourage you to continue applying for the job offer. We value diversity of experiences and skills, and you could bring unique perspectives to our team.

Context And Mission

In the framework of the Earth-Sciences department, the candidate will substantially improve the efficiency and productivity of numerical weather and climate simulations on high-performance computing platforms by supporting the end-to-end workflows of global Earth system modeling in HPC environments.

This will be obtained by improving and supporting: the development and operation of modeling workflows on state-of-the-art supercomputer systems, and the usability of these models and tools throughout the European HPC ecosystem.

The candidate will develop solutions for cross-cutting HPC challenges, in particular in the weather and climate domain, and help to develop existing workflow orchestration software.

Key Duties

- Join the Autosubmit development team and work on improvements for the Autosubmit workflow engine.
- Contribute to the refactoring of the Autosubmit code towards a more modular, efficient, and maintainable solution that maximizes test coverage.
- Maintain the operational deployment on different HPC platforms.
- Contribute to the Autosubmit development strategy by analyzing the user needs and learning from the benefits and disadvantages of the most used workflow tools in the Earth Sciences domain.
- Support the users inside and outside the BSC center by adding new features to the existing and new tools.
- Facilitate the adoption of the solutions developed through workshops and seminars in and out of the department.
- Maintain the software in Git and deploy it to the HPC module and to the PyPi repository, publishing both source code updates and documentation.

Requirements

- Education
 - Having a Bachelor in Computer Science or related discipline.
 - Having a Master's degree will be valued.
- Essential Knowledge and Professional Experience
 - Excellent development skills in Python 3 and OOP, and experience with UNIX/LINUX environments and scripting languages (bash, ...)
 - Knowledge about the development and execution of scientific applications on parallel computers
 - Experience writing and maintaining tests (unit, functional, ...)
- Additional Knowledge and Professional Experience
 - Experience in version control in a collaborative environment, including SVN or Git
 - Previous experience in scientific Python packages (Python Numpy, Scipy, ...) will be valued
 - Understanding of HPC computer architecture issues including CPU, accelerators, memory, interconnect, parallel I/O, and computational performance
 - Good documentation skills, applied to software code documentation for other developers, and also general documentation for users.
 - Fluency in English

- Competences
 - Capacity to interact and build strong relations with both Earth and Computer scientists
 - 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 under 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 (37.5h/week), a good working environment, a highly stimulating environment with state-of-the-art infrastructure, flexible working hours, extensive training plan, restaurant tickets, private health insurance, support to the relocation procedures
- Duration: Open-ended contract due to technical and scientific activities linked to the project and budget duration
- Holidays: 23 paid vacation days plus 24th and 31st of December per our collective agreement
- 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: May 2024

Applications procedure and process

All applications must be made through BSC website and contain:

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

In accordance with the OTM-R principles, a gender-balanced recruitment panel is formed for every vacancy at the beginning of the process. After reviewing the content of the applications, the panel will start the interviews, with at least one technical and one administrative interview. A profile questionnaire as well as a technical exercise may be required during the process.

The panel will make a final decision and all candidates who had contacts with them will receive a feedback with details on the acceptance or rejection of their profile.

At BSC we are seeking continuous improvement in our recruitment processes, for any suggestions or feedback/complaints about our Recruitment Processes, please contact recruitment [at] bsc [dot] es.

For more information follow [this link](#)

Deadline

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

OTM-R principles for selection processes

BSC-CNS is committed to the principles of the Code of Conduct for the Recruitment of Researchers of the European Commission and the Open, Transparent and Merit-based Recruitment principles (OTM-R). This is applied for any potential candidate in all our processes, for example by creating gender-balanced recruitment panels and recognizing career breaks etc.

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.

For more information follow [this link](#)

Barcelona Supercomputing Center - Centro Nacional de Supercomputación

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