**382_21_CS_DOM_RE1**

**Job Reference**

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**Position**

Junior Developer (RE1)

**Data de tancament**

Dimarts, 30 Novembre, 2021  
Reference: 382_21_CS_DOM_RE1  
Job title: Junior Developer (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, 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 700 staff from 49 countries.

Look at the BSC experience:  
[BSC-CNS YouTube Channel](https://www.youtube.com)  
Let's stay connected with BSC Folks!

**Context And Mission**

The Workflows and Distributed Computing Group at BSC is looking for a junior developer willing to work on the internals of dataClay, an open-source object-based storage platform. dataClay is a distributed platform aimed at storing, sharing and processing huge amounts of data. A distinguishing feature of this platform is that, from the point of view of the applications, data is stored and managed in the form of objects, which include both the data as well as the methods that manipulate it. In this way, dataClay is able to perform different optimizations to increase the performance of applications using these objects. The objective of this position is to participate in the definition and implementation of the platform, mostly within the framework of ADMIRE, an international collaboration research project.

The motivation for the ADMIRE project is the growing need to process extremely large data sets, which is one of the main drivers for building HPC systems today. However, current HPC architectures no longer...
satisfy the performance requirements of data-processing applications. At the same time, emerging multi-tier storage hierarchies, including new kinds of devices such as Non-Volatile Memories, come with the potential to remove this barrier. The main objective of the ADMIRE project is to create an active software stack that dynamically and intelligently adapts computation and storage resources to the application needs, providing elasticity and combining different kinds of devices, from memory to disk.

**Key Duties**

- Participate in the design and implementation of dataClay, both in the context of the ADMIRE project and in collaborations with other research groups within and outside the BSC.
- Participate in the integration of dataClay in the proof-of-concept resulting from the ADMIRE project, and in its validation in real scenarios through the project use cases.
- Participate in the design and implementation of new dataClay functionalities or integrations resulting from collaborations with other research groups within or outside the BSC.
- Manage dataClay code releases and continuous integration

**Requirements**

- **Education**
  - Degree in Computer Sciences, Telecommunications or related discipline. Computer science students in their final course can also apply.

- **Essential Knowledge and Professional Experience**
  - Good programming skills in Python and Java
  - Knowledge in distributed computing

- **Additional Knowledge and Professional Experience**
  - Parallel programming (very valuable)
  - Operating systems (valuable)
  - File systems (valuable)
  - Containers and orchestration (valuable)
  - Continuous integration and quality assurance (valuable)

- **Competences**
  - Strong analytical and programming skills
  - Capacity to understand new concepts
  - Capacity to generate new ideas and/or solutions
  - Capacity to work independently and also in a team
  - Fluency in spoken and written English
Conditions

- The position will be located at BSC within the Computer Sciences Department
- We offer a full-time contract, a good working environment, a highly stimulating environment with state-of-the-art infrastructure, flexible working 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 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 of rejection of their profile.

For more information follow [this link](#)

Deadline

The vacancy will remain open until 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](#)

This position is reserved for candidates who meet the requirements and have the legal status of disabled persons with a degree of disability equal to or greater than 33%. In case there are no applicants with disabilities that meet the requirements, the rest of the candidates without declared disability will be evaluated.

Barcelona Supercomputing Center - Centro Nacional de Supercomputación