

## [410\\_24\\_CS\\_DCC\\_RE1](#)

### Job Reference

410\_24\_CS\_DCC\_RE1

### Position

Research Engineer - RISC-V Software ports (RE1)

### Data de tancament

Dilluns, 16 Setembre, 2024

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**Job title:** Research Engineer - RISC-V Software ports (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](#)

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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 context of VITAMIN-V european project (2023-2025), the Data Centric Computing Group from the Computer Science Department searches an engineer willing to work in a project with leading industry players to support the next wave of Exascale computing advancements centered in the initiative RISC-V. The task will be supporting the port to RISC-V of well-known and widely used software runtimes and cloud environments, as Spark, TensorFlow, OpenStack. Additionally, given the research nature of the group, collaborate on the development and optimization of big data and machine learning frameworks, contributing to advancements in AI and data science.

For this tasks, we search engineer with different background, system administrator (to guide the installation and adaptation of the software), to programmers knowing the RISC-V platform and willing to participate in the coding of extensions for it.

## Key Duties

- Implement and port Big Data and Analytics runtimes to RISC-V (i.e, Spark, Tensorflow)
- Port cloud management software to RISC-V (OpenStack)
- Implement LLVM extensions (in C++) to support new languages to RISC-V
- Contribute to the development and porting of Big Data and Machine Learning frameworks

## Requirements

- Education
  - Ms.C on computer science or equivalent working experience
- Essential Knowledge and Professional Experience
  - A foundation in compilers (e.g., LLVM), virtualization (Kubernetes, Docker), big data (Spark, TensorFlow), and programming (C++, Bash, Java, Python, R).
- Additional Knowledge and Professional Experience
  - A curiosity-driven mindset with a willingness to explore RISC-V architectures, cross-compiling toolchains, and beyond.
- Competences
  - A collaborative attitude, ready to join a team that's passionate about making a difference.
  - Good English communication skills, with an enthusiasm for sharing research findings through papers and conferences.

## Conditions

- The position will be located at BSC within the Computer 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: 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 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](#)

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

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