Job Reference

348_19_CS_GCS_RE1

Position

HPC Runtime Software Engineer (RE1)

Data de tancament

Dijous, 16 Gener, 2020
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Job title: HPC Runtime 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, 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 650 staff from 49 countries.

Look at the BSC experience:
BSC-CNS YouTube Channel
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Context And Mission

The Computer Sciences (CS) department of the Barcelona Supercomputing Center is a key participant of the European Processor Initiative (EPI) which aims to design and execute a roadmap for a future European low power processor for HPC and automotive. BSC involvement in the EPI project includes work for parallel runtimes in the context of HPC. Goals include making sure parallel applications can run on the EPI platform (including the accelerators) and porting several in-house developments to the LLVM infrastructure.

Key Duties

- Port several in-house runtime developments to the LLVM runtime and compiler
- Evaluate usefulness of those developments in the context of EPI
- Ensure common HPC runtimes (like MPI) are useable for the EPI platform which includes RISC-V and Arm.

Requirements

- **Education**
  - Bachelor or Master degree in Computer Science

- **Essential Knowledge and Professional Experience**
  - Good skills in C/C++
  - Experience in HPC runtimes. Including OpenMP and MPI
  - Knowledge of HPC architectures and systems
  - Ability to deal with lower-level aspects of systems like instructions, assembler language and binary interfaces

- **Additional Knowledge and Professional Experience**
  - Knowledge of Fortran is a plus

- **Competences**
  - Good communication and interpersonal skills to be able to work within a team to complete tasks on schedule
  - Show a problem-solving, can-do, pro-active and result-oriented attitude
  - Are keen to deliver good quality code and follow good practices in the industry
  - Aware of the challenges faced by nowadays HPC.

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 - Linked to EPI duration 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: Pending

Applications Procedure

All applications must include:

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

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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