Main activities

Assignment

This position consists in conducting research in the area of software engineering and (distributed) systems in collaboration with the members of the Inria Spirals project-team.

In particular, this position focuses on the design and implementation of novel middleware solutions to drastically improve the power efficiency of modern data centers. In the context of an ongoing collaboration with a Cloud provider, ScalaIR. The research activities covered by this position will consider various layers of opportunities for reducing the power consumption of the cloud at large, from alternative hardware architectures, to novel software optimizations.

To bootstrap the activities, the initial research contributions will leverage our previous works on cloud computing optimisations [1,2] and energy monitoring [3,4] in production. Depending on the orientation of the results, contributions to open source projects developed by our research group, like PowerAPI (http://powerapi.org) and the rest of the community will be encouraged.

Given the position, the researcher recruited as part of the team will be encouraged to work in collaboration with other members of the team (phd students, engineers, interns) and be involved in the supervision of PhD thesis related to the topic of interest. This also applies to ongoing and future academic and industrial collaboration on the topic of energy efficiency. We are therefore looking for highly motivated applicants to fulfill this position.

Main activities
- Study the state-of-the-art solution published in this domain
- Propose and design novel solutions to reduce the energy footprint of datacenters
- Prototype and evaluate the designed solution
- Publish the obtained results in high quality venues (conferences and journals).
- Disseminate the software results if applicable

**Skills**

Technical skills and level required:

- Knowledge of system, network and storage challenges related to the cloud
- Knowledge of software engineering principles (and practices)
- Curiosity, autonomy and social capabilities

Languages:

- English
- French

**Benefits package**

- Subsidised catering service
- Partially-reimbursed public transport

**Remuneration**

Around 31 000 € bruto yearly