PhD position in Distributed Systems at Univ. Grenoble Alpes

Title: PhD position at Grenoble Informatics Lab (Univ. Grenoble Alpes) to work on distributed systems

Keywords: Distributed systems, high performance computing, cloud computing, data analysis.

Contacts:

- Thomas Ropars (thomas.ropars@univ-grenoble-alpes.fr) – main contact –
- Noel De Palma (noel.depalma@univ-grenoble-alpes.fr)

Application

To apply, please send us:

- A detailed CV
- A motivation letter
- The name and email address of at least two persons that can recommend you

Location:

The student will integrate the ERODS research team (`http://erods.liglab.fr`) at LIG lab (Grenoble Informatics Lab – `http://www.liglab.fr`). The laboratory is located on the campus of Univ. Grenoble Alpes.

Important information:

- Dates: ASAP
- Position funded for 3 years (duration of a PhD thesis in France – the 3 years are fully dedicated to research as the student is not required to follow courses)

Required skills:

Candidates should have the ability to work independently and be willing to work in a highly competitive environment. Candidates should have some knowledge in operating systems as well as in distributed systems. Good programming skills are also required. Good level in written and spoken English is mandatory.

Description:

The raising domain of High Performance Data Analytics (HPDA) aims at taking advantage of the huge processing power of supercomputers to run large scale data analysis applications.

Existing frameworks to manage and process large amounts of data are mostly developed in the cloud ecosystem. Hence moving to supercomputers raises numerous questions. The problem is highly challenging due to the major differences between cloud infrastructures and supercomputers with respect to both the hardware architecture and software stack.

The goal of the PhD is to better understand how data analysis workloads can make best use of the resources of supercomputers to run efficiently. More specifically, we would like to understand the best way of processing large amounts of data considering the complex storage hierarchy (including Solid-State drives and Storage-Class memory) of current and future supercomputers as well as the large amount of processing units (multicore and manycore processors) they provide.

The work is to be run in the context of a project involving several academical and industrial partners with application domains related to healthcare, aeronautics and data-center management.

The position is an opportunity to work in a very stimulating context. LIG is a worldwide known computer science research lab. The ERODS team includes more than 20 members (professors, PhD students, and engineers) working in different fields related to distributed systems and operating systems.