

Call for contribution of expertise

CERN invites collaborating institutes and universities to contribute the expertise of their qualified employees to the activity described below.

Start date: 01/09/2018

Duration: One year, possible extensions to a maximum of up to three years.

Project/Activity: Computing Engineer for Cloud Container services in the Data Centre

Detailed description of Activity:

The CERN Cloud Infrastructure team provide a large variety of resources to the physics experiments and the organization: ~37000 Virtual Machines hosted on 9000 compute nodes. We are enhancing the service offering by adding Container Cluster Orchestration and Bare Metal deployments, to address emerging use-cases. In particular, the Cloud team are looking to offer Kubernetes container clusters hosted on Bare Metal, for Compute intensive workloads, such as HTCondor Batch clusters. This would simplify deployments, and improve the CPU efficiency of the Batch resources.

The expert will contribute to the enhancement of the Cloud offering. In particular:

- contribute to the deployment of Kubernetes containers on bare metal with Openstack Ironic, with an aim to support the rollout of the local WLCG batch services onto this fabric and ease the adoption of externally purchased compute resources.
- ensure the long term sustainability of the services, working directly with upstream Kubernetes and OpenStack communities.
- ensure a strong presence of CERN and our requirements in these communities, providing regular feedback regarding operational and development aspects.
- assume an operational role in the Cloud service team, and contribute to the day-to-day running of the service.

Profile: Qualification: Bachelor's degree in the field of Computer Science or related field, or equivalent. Good knowledge of Linux system administration, and experience with the Python programming language. Knowledge of any of the technologies mentioned above would be an asset but is not necessary.

Specific details: Work will be in a team of engineers with frequent contacts with users and therefore a dynamic attitude to share and discuss ideas and suggestions within the team is very important. The team works and communicates in English therefore, a good working knowledge is needed.

Status at CERN: Associated Member of the Personnel (Project Associate or COAS).

Conditions in accordance with CERN's Staff Rules and Regulations and Administrative Circular No. 11. Subsistence allowance is payable by CERN to cover the additional cost arising from the individual's (and, as applicable, their family's) stay in the local area while performing activities at CERN.

Option: Collaborating institutes and universities can propose to support the activity of the qualified employees participating in this "Call for contribution of expertise" with students or other employees. Their status and Subsistence allowance when applicable will be adapted to their relation with their institutions

Contact person: it-dep-fas-inform@cern.ch

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