

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 extension to a maximum of up to three years.

Project/Activity: EOS\CERNBox Intelligent System for diagnostics and remediation -

Detailed description of Activity:

The IT-ST group at CERN runs and evaluates innovative cloud storage technologies for their application to big data problems in high-energy physics research. One of them is CERNBox, the CERN cloud synch and share platform which is built on top of own Cloud (open source software) and uses EOS, the CERN 250-Petabyte disk storage built from commodity hardware in use at CERN. CERNBox provides an easy access to users' data, at any time, from anywhere, on any device while heavy-duty analysis tasks access EOS via several different protocols.

The expert will join the group responsible to develop, operate and support these systems. The project aims to build on the operational experience and improve the current troubleshooting and diagnostic system, including the development of a system to collect existing monitor information and assist engineers in the actual troubleshooting. Ideally, the system should learn from observed patterns and be in the position to propose remediation recipes. This type of approach has been successfully used by Netflix (Winston) and other companies to automate mitigation procedure on their systems.

Profile: Bachelor degree in computing engineering or equivalent field. The expert will have knowledge of scripting languages (e.g. python/bash) as well as programming languages (C/C++/Java), experience with Linux and web services, and be part of a multinational team. S(he) will gain working experience with a large-scale data storage system and exposure to the support and evolution of several IT services primarily in the data management area. The project aims to roll out the system in production to support mission-critical activities like LHC data taking.

Specific details: Occasional availability during nights/weekends when needed. Diplomacy and excellent team-working attitude. Valid driving license. Good working knowledge of English.

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

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