

## 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:* Re-engineering of tape operations toolset

### *Detailed description of Activity:*

CERN manages the largest scientific data archive in the High Energy Physics domain. The archive currently holds over 250 Petabytes, with forecasts of up to 100PB of new data added per year. The expert will join the Tapes, Archives and Backup (TAB) section of ST group (IT Department). The TAB section is responsible for running the tape-based archive and is also developing the upcoming CERN Tape Archive (CTA) software that will provide a direct tape back-end to EOS, CERN's disk storage system.

The goal of this project is to contribute to the re-design and porting of CERN's tape management operational tools from the current production system (CASTOR) to EOS/CTA. This includes tools for daily tape administration tasks, configuring and monitoring tape servers and drives, generation of problem reports, drive and media health check and testing tools, media repair scripts, management of tape pools, etc.

The expert will work in close contact with the tape service managers as well as the developers of CTA and EOS.

*Profile:* MSc/BSc in Computer Science or related field(s)

*Required skills/expertise:* Programming languages: scripting languages (Python/Perl/shell), C/C++. Acquainted with Linux and systems administration tools such as Puppet. Relational databases and SQL. Experience with Data Management tools and techniques would be an advantage.

*Specific details:* The expert should be able to work independently and pro-actively propose solutions to the problems encountered along the way. He/she should also have team-working attitude. Good working knowledge of either English or French.

*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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