

## 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:* asap

*Duration:* One-year, possible extension to a maximum of up to three years.

*Project/Activity:* Real-time Domain Name Server configuration updates

### *Detailed description of Activity:*

CERN's network and telecommunications infrastructure are essential to all activities of the laboratory. It supports CERN's high-performance data centre network, technical network, and over a hundred thousand user devices.

This infrastructure is designed, configured, and managed using an internally developed suite of Web applications built with state-of-the-art technologies: Java, Spring, AngularJS, Oracle, Kubernetes.

The domain name servers are currently configured statically via regular exports of the network database (LanDB). The expert will develop a microservice to convert network configuration changes into dynamic DNS updates, in order to modify the configuration of the DNS server in near real-time.

The expert will be part of an agile software team of talented young developers, will contribute to integrate these technologies, and will participate in all aspects of software development (design, coding, and support) in all Web applications supported by the team.

*Profile:* Bachelor's degree in the field of Computer Science or related field, or equivalent. Software development experience in Web applications, agile methodologies, and related tools (VCS, bug tracking, build pipelines). General experience using databases (ideally Oracle). Programming Languages: Java, JavaScript, SQL, PL/SQL or similar

*Specific details:* As developer in an agile team, the expert will work on Web applications for network management, learn about modern Web technologies (among which AngularJS, Spring, Docker, Grails) and software development methodologies (Agile, Scrum). The team works and communicates in English; therefore, a good working knowledge is needed.

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

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 relationship with their institutions

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