Software Engineer

Requesting Unit

BE-CO-DS

Associated Benchmark Job

Computing Engineer

Grade
6 or 7

Job description

Introduction

Are you a skilled Software Engineer? Want to take an active role in the design and development of the systems used by the CERN installation, operation and maintenance teams to model, manage, control, and analyse the behaviour of the particle accelerators? Then join CERN's Controls Data Services team and realize your potential. Take Part!

You will join:
- The BE Department, responsible for the beam generation, acceleration, diagnostics, controls and performance optimization for the LHC and its injector accelerators.
- The CO Group, responsible for providing and supporting the controls infrastructure used to operate and maintain these particle accelerators 24 hours a day.
- The DS Section: a dynamic and quality-oriented agile team, responsible for the mission-critical database centric services, associated applications and user interfaces.

Functions

As a Software Engineer in the DS Section, you will join a team to provide software systems to facilitate accelerator fault tracking, infrastructure layout (topology) management, control system configuration, and data acquisition and logging. In this team you will take a major role in the development and evolution of the aforementioned systems which are critical for CERN's mission and used all over CERN. In particular you will:
- Participate in the whole software development lifecycle (requirements, design, development, testing), following a modern agile approach.
- Communicate with the end-users of the services to understand their needs and help translate these into appropriate software solutions.
- Interact with skilled and motivated software engineers on a daily basis to deliver quality results.
- Investigate, diagnose and resolve operational problems.
- Mentor junior developers.

Qualifications

Master's degree in the field of computing, computer science, software engineering, or equivalent.

Experience

The experience required for this post is:

- Proven experience in Java development using Spring and JPA.
- Proven experience in Web application development using JavaScript (ES5 or ES6).
- Proven experience to build new software systems and evolve existing ones.
- Experience applying software quality assurance techniques and practice with corresponding tools.

- Professional experience with relational databases including a strong knowledge of SQL.

The following are considered as assets but are not mandatory:
- Experience working with REST, JSON and developing client applications with AngularJS or Angular and Typescript.
- Experience in tuning DBMS performance (preferably Oracle) and/or integration with application software.

Technical competencies

The technical competencies required for this post are:

- Programming/Software development: core software design principles and application development.
- Database/Repository design: SQL (Oracle DBMS is a plus).
- Systems integration: integration and testing of components and/or subsystems and their interfaces.
- Application support: provide support of operational systems.
- Technical Advice and Guidance: working with end users to understand their needs and provide corresponding technical solutions.

Behavioural competencies

The behavioural competencies required for this post are:

- Achieving results: having a structured and organized approach towards work; being able to set priorities and plan tasks with results in mind.
- Learning and sharing knowledge: keeping up-to-date with developments in own field of expertise and readily absorbing new information; sharing knowledge and expertise freely and willingly with others; coaching others to ensure knowledge transfer; Thinking "out of the box" and proposing fresh ideas, insights and methodologies.
- Working in teams: understanding when teamwork is required to achieve the best results; including others accordingly and sharing information; Working well in groups and readily fitting into a team; participating fully and takes an active role in team activities.
- Demonstrating flexibility: adapting quickly and resourcefully to shifting priorities and requirements; instigating and promoting change as an opportunity for organizational development.

Language skills

The language competencies required for this post are:

Spoken and written English, with the ability to draw-up technical specifications and/or scientific reports, and/or to make oral presentations. The knowledge of the French language or the willingness to acquire this rapidly would be an advantage.

Additional information

Eligibility and closing dates

Diversity has been an integral part of CERN's mission since its foundation and is an established value of the Organization. Employing a diverse workforce is central to our success. We welcome applications from all Member States and Associate Member States (http://cern.ch/jobs/content/member-states).

This vacancy will be filled as soon as possible, and applications should normally reach us no later than xx.xx.xxxx.

Employment Conditions

Contract type: Limited duration contract (5 years). Subject to certain conditions, holders of limited-duration contracts may apply for an indefinite contract.

	These functions require shift work, including nights, Sundays and official holidays.
	These functions require participation in a regular stand-by duty, including nights, Sundays and public holidays.
	These functions require work during nights, Sundays and public holidays.
	These functions require work in Radiation Areas.
	These functions require interventions in underground installations.
	A valid driving licence is required.

	SPECIAL CONDITIONS WHICH MAY BE REQUIRED DEPENDING ON THE NEED OF THE ORGANIZATION
	Shift work, when required by the needs of the Organization
X	Stand-by duty, when required by the needs of the Organization
X	Work during nights, Sundays and official holidays, when required by the needs of the Organization