

Description of the new tasks to be covered in the BE-CO group

**Title of the activity to cover: 1.0**

**Linux System Administrator**

**Description of the activity to be covered**

Does the idea of developing the mission-critical computing infrastructure of the Accelerator complex at CERN, the largest particle physics laboratory in the world, and providing operational support, attract you? Become involved in the operation and evolution of the CERN accelerator computing infrastructure. CERN, take part!

You will join:

- The Beams Department that is responsible for the operation and performance of the entire CERN accelerator complex, including the injector complex and their experimental areas and the LHC.
- The Controls Group that is responsible for the specification, design, procurement, integration, installation, commissioning and operation of the controls infrastructure for all CERN accelerators, their transfer lines and the experimental areas. Support is also provided to the technical infrastructure services that rely on standard controls facilities provided by the group (<https://be-dep-co.web.cern.ch/>).
- The Infrastructure Section that is in charge of the specification, procurement, administration and support of the CERN accelerator computing infrastructure. This portfolio covers the high-performance server platforms of the accelerator data center, operator workstations and accelerator real-time hardware platforms with their associated fieldbus networks (<https://be-dep-co.web.cern.ch/infrastructure>).

You will contribute to the mandate of the system administration team, covering the following domains:

- Integration and monitoring of all systems connected to the accelerator control system (consoles, servers, real-time embedded platforms, network agents, etc.);
- Installation, configuration and support of the control system computing platform for development and accelerator operation, based upon the Linux operating system;
- Operation of central control system computing servers;
- Computer and network security;
- Deployment and management of virtualized hosts;
- User support.

Your main activities will consist more particularly of:

- Provide support and general maintenance for the Linux operating system. Act as sys-admin linkman for users, in particular with developers, application experts and operators to register their requests or error reports and to perform first level diagnostics and fixes.

- Linux troubleshooting. Many in-house and/or commercial software are in-use in our facilities. Helping users and proposing improvement to existing deployments.
- Participate actively to the Linux OS migration (to CentOS 8/Stream) and Linux standardisation project we are setting up in the CO group.
- In collaboration with the sys-admin team, review the Linux distribution upstream packaging with the support of the RHEL community and its preconized schemas.
- Take part in the design and development of the testbed we have decided to set up to guarantee the quality and reliability of the systems deployed during the annual intervention.
- Help the sys-admin team to setup a Sanity Check mechanism to perform initial and recurring tests of our infrastructure.

<b>Section to be integrated</b>		BE-CO-IN			
<b>Technical managers</b>					
<b>Desired start date</b>		As soon as possible			
<b>Estimated duration of the activity</b>					
<b>CERN estimate of the personal quantity needed to cover the activity</b>		1			
<i>CERN estimate of the technical level of the staff involved and percentage of occupation</i>					
<b>First speaker</b>		<i>Percentage on the task</i>		100%	
Mid-level Engineer					
<b>Main place of work</b>		CERN - Geneva			
Ready to intervene in					
PS	SPS	LHC	XXX	XXX	XXX
<b>Qualification</b>		Proven background in the field of Linux system administration (academic or technical engineer).			

<p style="text-align: center;"><b>Other qualifications</b></p> <ul style="list-style-type: none"><li>• Knowledge of English (French would be a plus)</li><li>• Ability to work effectively in a multi-cultural environment</li><li>• Ability to work in a team</li><li>• Ability for communication and users support</li><li>• Ability to communicate clearly and write technical documents</li></ul>	<p><b>Skills</b></p> <ul style="list-style-type: none"><li>• Linux OS: Red Hat, CentOS (7, 8)</li><li>• Knowledge of configuration management software, Ansible in particular</li><li>• Scripting, Bash</li><li>• Familiarity with software development will be a plus (Python, C/C++).</li></ul> <p>A strong experience of Ansible is not mandatory but we expect the candidate to be willing to learn it quickly with possible training provided by CERN.</p>
---	---