Senior engineer USIT - IT-Support for the Centre for Molecular Medicine Norway (NCMM)

About the position

This position is aimed at those who want to work at the intersection of information technology, research, and research methods, together with the Department for Research Services at the University of Oslo’s Center for IT (USIT). The main task of this position is perform scientific computing support at a fairly research domain integrated level within the NCMM (https://www.med.uio.no/ncmm).

The Department for Research Infrastructure is located in the Division of IT in Research. USIT is responsible for the operations, development, and user support for IT solutions and services at the University of Oslo (UiO). USIT is one of Norway’s largest public IT environments with 200+ employees. We work with a broad range of future oriented technologies across a large set of interesting problems. We emphasize giving employees challenging opportunities, providing the foundation for rich learning and personal development.

The division as a whole is among other things responsible for tasks under the mandate of Uninett Sigma2, the organization for national collaboration for storage and High Performance Computing (HPC). The department collaborates with CERN in operating experiments as part of the Worldwide LHC Computing Grid (WLCG) and the Nordic Datagrid Facility (NDGF). In PRACE (Partnership for Advanced Computing in Europe) the department has responsibilities in HPC operations for the Nordic Tier-1 resources, for experimenting with new technologies for the future of HPC, and in prototyping of Exascale-ready software solutions. Similar activities are also pursued through our involvement with the European Open Science Cloud (EOSC) and the Nordic eInfrastructure Collaboration (NeIC). Locally at UiO, the division has responsibility for the Services for Sensitive Data (TSD) and its HPC cluster, Colossus. TSD is Norway’s largest special purpose eInfrastructure, primarily serving the needs of health researchers in Norway and European projects such as Tryggeve2. UiO is also part of the Lumi consortium as to ensure the ability to utilize the large USIT competence pool and future USIT HPC facilities. The Centre for Molecular Medicine Norway (NCMM) was established in 2008 and is the Norwegian node in the Nordic EMBL Partnership for Molecular Medicine. NCMM is a joint venture between the University of Oslo, Health Region South-East and the Research Council of Norway. The overall objective of NCMM is to conduct cutting edge research in molecular medicine and biotechnology. NCMM focuses on precision medicine and systems technologies with expertise in computational biology, genome medicine, as well as chemical and structural biology. The division has had a long term relationship with NCMM, and will now hire a full time position in our staff with the main purpose of serving the NCMM Scientific Computing needs. The position will be anchored at the University Center for Information Technology as to ensure the ability to utilize the large USIT competence pool and future USIT HPC facilities. The position does not cover basic IT support (e.g. login, laptop operations), but is addressing advanced IT based research support at NCMM up to a level of exascale. The Section for Research Services: https://www.usit.uio.no/om/organisasjon/itf/ft/index.html

More information:

- The NCMM IT infrastructure serves approximately 100 scientists and local facilities, as well as external scientific collaborators.
- The NCMM computing facility consists of three employees, and its expanding IT infrastructure currently consists of 150 desktop and scientific instrument computers, 12 Linux servers for HPC applications, 0.5 Bb of server storage capacity, two Gigabit grade Ethernet wired networks (lab production and academic network), as well as relevant printing and WiFi (Eduroam) facilities.

Work tasks

You will be responsible for solely or as part of a team:

- Deploy scientific computing software from source code or binary forms on a number of High Performance Computing Linux servers. The deployment often involves efficiently automating the software deployment process.
- Maintaining and adapting (in Perl, Python and C/C++) complex software pipelines that contain an increasing number of software dependencies to function properly.
- Documenting the scientific computing environment both in terms of the number/type of applications, their versions with the goal to make the IT infrastructure easier to use by the NCMM scientists.
- Participate in capacity planning to ensure that the NCMM IT infrastructure can accommodate the scientific computing requirements of the scientists.
- The candidate will be interacting both with the Life Science and IT personnel. Frequent interaction with the NCMM life scientists is required in order to obtain a good understanding of their scientific domain and help them use the facilities in the most efficient manner.
- Most work-days will be spent physically at the NCMM locations

Qualification requirements
Bachelor’s Degree in Computer Science or a combination of Computer Science/ Bioinformatics. Documented alternative experience can replace this formal requirement. A Master of Science or PhD degree within the field will be an advantage and is required for position as senior engineer.

At least 3 years of documented previous exposure in an international R&D environment.

Good knowledge of Python 2.x/3.x, C/C++ and Perl (5.x/6.x) programming. Ability to install from source and troubleshoot scientific computing packages on Linux and Windows servers.

Good knowledge of Bash Shell scripting

Good knowledge of version control (svn/git), gdb and other scripting language debugging tools is needed.

Knowledge of containers (eg, Docker, Singularity) for scientific computing infrastructures

Knowledge of Cfengine Ansible and DevOps methodologies for configuration management and pipeline deployment automation

Good knowledge of SQL and the MariaDB/MySQL/Postgres RDBMS environments is important.

Intermediate knowledge of Linux server (RHEL, CentOS) administration: yum package management, web server and LVM administration, qemu/kvm virtualization, ability to use kickstart to automate Linux workstation and server deployments, NFS server administration

Preferred additional skills

- Knowledge of SLURM and exposure to supercomputing queue/ batch system environments to assist scientists to use National and European supercomputing facilities will be an advantage.
- Exposure to transcriptomics, chemoinformatics and structural biology (in particular CryoEM) scientific applications is considered an advantage.

Personal skills

- Ability to communicate with non-technical users and help Life Scientists to use complex infrastructures.
- Good interpersonal skills and command of the English language are essential.
- Good time management skills and ability to work under pressure to meet deadlines.

We offer

The position is posted as a “senior engineer” (SKO 1181) or an “over engineer” (SKO 1087), and the hired person will get a position according to the experience and qualifications held. For a senior engineer there is a much higher expectation to the ability to perform major tasks independently, and also the possibility to lead smaller projects. The salary level will be for SKO 1181 within the start range of 615.900 NOK to 741.300 NOK, while SKO 1087 will have a range of 573.000 NOK to 627.700.

How to apply

The application must include:

- cover letter statement of motivation
- CV (summarizing education, positions and academic work)
- copies of educational certificates (academic transcripts only)

The application with attachments must be delivered in our recruiting system.

Formal regulations

Interviews with the best qualified candidates will be arranged.

According to the Norwegian Freedom of Information Act (Offentleglova) information about the applicant may be included in the public applicant list, also in cases where the applicant has requested non-disclosure.

Contact information

Assistant director USIT Gard Thomassen at 936 74 926, gardot@usit.uio.no, or NCMM Director Janna Saarela, janna.saarela@ncmm.uio.no

About the University of Oslo

The University of Oslo is Norway’s oldest and highest ranked educational and research institution, with 28 000 students and 7000 employees. With its broad range of academic disciplines and internationally recognised research communities, UiO is an important contributor to society.

The University Center for Information Technology (USIT) provides infrastructure, IT services and IT solutions for both the University of Oslo and the higher education sector in Norway. USIT is one of the largest IT professional environments in Norway, with more than 200 permanent employees and with a turnover of more than 260 million NOK. We work with a wide range of exciting technical solutions based on future-oriented technology. USIT places great emphasis on providing its employees with challenging and educational tasks that provide excellent opportunities for professional development.

Jobbnorge-ID: 189787, Søknadsfrist: 15. august 2020