



Offre n°2024-07733

Development & Research Engineer @ Grenoble: Functional Package Manager Helping System Experiments on Supercomputers / Ingénieur R&D @ Grenoble: Gestionnaire de paquet fonctionnel pour l'expérimentation sur les Supercalculateur

Le descriptif de l'offre ci-dessous est en Anglais

Type de contrat : CDD

Contrat renouvelable : Oui

Niveau de diplôme exigé : Bac + 5 ou équivalent

Fonction : Ingénieur scientifique contractuel

Niveau d'expérience souhaité : Jeune diplômé

A propos du centre ou de la direction fonctionnelle

The Centre Inria de l'Université de Grenoble groups together almost 600 people in 22 research teams and 7 research support departments.

Staff is present on three campuses in Grenoble, in close collaboration with other research and higher education institutions (Université Grenoble Alpes, CNRS, CEA, INRAE, ...), but also with key economic players in the area.

The Centre Inria de l'Université Grenoble Alpes is active in the fields of high-performance computing, verification and embedded systems, modeling of the environment at multiple levels, and data science and artificial intelligence. The center is a top-level scientific institute with an extensive network of international collaborations in Europe and the rest of the world.

Contexte et atouts du poste

The candidate will join the [DataMove](#) INRIA team located on the campus of the Univ. Grenoble Alpes near Grenoble. The DataMove team is a friendly and stimulating group with a strong international visibility, gathering Professors, Researchers, PhD and Master students all pursuing research on High Performance Computing.

This work experience will bring you skills in high performance computing and DevOps (expert level) that are in high demand.

This work is part of a joint collaboration with national and international academic partners, giving you the opportunity to work in an international context.

Hiring date is flexible, starting as early as September 2024. Initial contract is for 30 months, with possibilities for extension.

The city of Grenoble is surrounded by the Alps mountains, offering a high quality of life, and where you can experience all kinds of mountain related outdoors activities and more.

The position is made available in the context of the [Exa-AToW](#) project (Data-oriented Software and Tools for the Exascale) of the NumPEX National Program: [Exa-AToW](#)

Mission confiée

We are developing NixOS Compose (<https://github.com/oar-team/nixos-compose>) a tool designed for experiments in distributed systems. It generates reproducible distributed environments. Those can then be deployed either in virtualized or physical platform, respectively for local and distributed deployments. It inserts itself in the development cycle of the environments and uses to the notion of transposition to make it faster and easier. The intended workflow is to have fast iteration cycle on a local virtualized distributed system and once the configuration is complete it can be used for physical deployment.

NixOS Compose is based on Nix (<https://nixos.org/>) a functional package managers which provides reproducibility and allows to elaborate and master complex software stack.

We are looking for a candidate that will join our team to develop NixOS Compose and its use in Exa-AToW project.

Principales activités

- Consolidating and extending NixOS Compose, for instance to improve user experience, and adding new platform and hardware target (Cloud, Edgs, ARM64)
- Develop experiments to evaluate Workflow Management System solutions for High Performance Computing (HPC)
- Run experiments on a variety of clusters and hardware.
- Participate to the research activity, possibly leading to publications.
- Participate and animate tutorials.
- Help user of NixOS-Compose.
- Collaborate with other national (Pepr Numpex) and European partners because this work will also be part of a start-up European project.

Through this work the candidate will gain strong expertise in DevOps technics and in high performance computing systems. She/he will integrate a dynamic research team and have the opportunity to work in an international context. The team also promotes the FOSS culture and is concerned about environmental sustainability issues related to IT and HPC.

Compétences

We welcome candidates with a master (or equivalent title) in computer science, experience with distributed systems and operating system.

Expected technical skills include Linux, System Administration, Python and a functional language (or desire to learn one), mastering of development processes is a plus (git, continuous integration, containers, etc.).

No previous work experience required as long as you are motivated and ready to train yourself to complement your skills.

Avantages

- Subsidized meals
- Partial reimbursement of public transport costs
- Leave: 7 weeks of annual leave + 10 extra days off due to RTT (statutory reduction in working hours) + possibility of exceptional leave (sick children, moving home, etc.)
- Possibility of teleworking (90 days / year) and flexible organization of working hours (except for internship)
- Social, cultural and sports events and activities
- Access to vocational training
- Social security coverage under conditions

Rémunération

From 2,692 € (depending on experience and qualifications).

Informations générales

- **Thème/Domaine** : Systèmes distribués et intergiciels
Infrastructure (TIC) (BAP E)
- **Ville** : Montbonnot
- **Centre Inria** : [Centre Inria de l'Université Grenoble Alpes](#)
- **Date de prise de fonction souhaitée** : 2024-09-01
- **Durée de contrat** : 3 ans
- **Date limite pour postuler** : 2024-10-23

Contacts

- **Équipe Inria** : [DATAMOVE](#)
- **Recruteur** :
Richard Olivier / olivier.richard@inria.fr

A propos d'Inria

Inria est l'institut national de recherche dédié aux sciences et technologies du numérique. Il emploie 2600 personnes. Ses 215 équipes-projets agiles, en général communes avec des partenaires

académiques, impliquent plus de 3900 scientifiques pour relever les défis du numérique, souvent à l'interface d'autres disciplines. L'institut fait appel à de nombreux talents dans plus d'une quarantaine de métiers différents. 900 personnels d'appui à la recherche et à l'innovation contribuent à faire émerger et grandir des projets scientifiques ou entrepreneuriaux qui impactent le monde. Inria travaille avec de nombreuses entreprises et a accompagné la création de plus de 200 start-up. L'institut s'efforce ainsi de répondre aux enjeux de la transformation numérique de la science, de la société et de l'économie.

Attention: Les candidatures doivent être déposées en ligne sur le site Inria. Le traitement des candidatures adressées par d'autres canaux n'est pas garanti.

Consignes pour postuler

Sécurité défense :

Ce poste est susceptible d'être affecté dans une zone à régime restrictif (ZRR), telle que définie dans le décret n°2011-1425 relatif à la protection du potentiel scientifique et technique de la nation (PPST). L'autorisation d'accès à une zone est délivrée par le chef d'établissement, après avis ministériel favorable, tel que défini dans l'arrêté du 03 juillet 2012, relatif à la PPST. Un avis ministériel défavorable pour un poste affecté dans une ZRR aurait pour conséquence l'annulation du recrutement.

Politique de recrutement :

Dans le cadre de sa politique diversité, tous les postes Inria sont accessibles aux personnes en situation de handicap.