Amsterdam, 24 June 2020

Developer for Cloud-based Virtual Research Environments

Vacancy - Terms of reference

JOB TITLE: Developer for Cloud-based Virtual research environments.

PURPOSE: Contribute to constructing Virtual Research Environments, including data management and processing, distributed workflow automation and performance optimization in Cloud environments.

LOCATION: LifeWatch-ERIC Virtual Laboratory and Innovation Center, Amsterdam, The Netherlands.

POSITION: Full-time, two-year term with a possible extension, starting as soon as possible.

COMPENSATION: Between €2,790 and €4,402 gross per month, depending on relevant experience (equivalent to University salary scale 10), based on 38 hours per week.

Job Description

We are looking for a 2-year scientific programmer to develop services and tools for a Virtual Research Environment (VRE), including data management and processing, distributed workflow automation and performance optimization in Cloud environments.

The candidate will closely work with the domain scientists from the domains of ecosystem and biodiversity, develop reusable solutions to tackle data challenges, validate the software via use cases, and integrate software components as part of a distributed Virtual Research Environment for a broader community. The candidate will actively review the state-of-the-art technologies in the context of cloud computing, big data and scientific workflow management, follow Agile, Co-development and other best practices of modern software engineering in Cloud environments to effectively deliver solutions to the VRE.

Contract and Working Environment

The candidate will be contracted by the LifeWatch ERIC Virtual Laboratory and Innovation Center in Amsterdam, The Netherlands and will work within the premises of the Multi Scale Networks Systems Group, Informatics Institute at University of Amsterdam.

LifeWatch ERIC is a European Infrastructure Consortium providing e-Science research facilities to scientists seeking to increase our knowledge and deepen our understanding of biodiversity organisation and ecosystem functions and services in order to support civil society in addressing key planetary challenges.
LifeWatch ERIC seeks to understand the complex interactions between species and the environment, taking advantage of High-Performance, Grid and Big Data computing systems, and the development of advanced modelling tools to implement management measures aimed at preserving life on Earth.
Combining a wide range of ICT tools and resources with deep knowledge of the domain, LifeWatch ERIC's mission is to be a "first class" worldwide provider of content and services for the biodiversity research community by:

- Offering new opportunities for large-scale scientific development
- Enabling accelerated data capture with innovative new technologies
- Supporting knowledge-based decision-making for biodiversity and ecosystem management
- Providing training, dissemination and awareness programmes.

The MNS group is part of the Systems and Security Lab (SNE), one of the three research clusters at the Informatics Institute. The group focuses its researches on the fundamental architectural problems that arise from the interconnection of systems and data flows, in particular the delivery of secure and sustainable ICT services across multiple domains. Within the MNS group, the “quality critical distributed computing” team is specially interested in novel programming and control models for distributed applications across large scale cloud infrastructures, and in developing interoperable data management and virtual research environment solutions for enabling interdisciplinary researches, e.g. in environmental and earth sciences or medical domains. The team leads the VRE development in the LifeWatch VL innovation center, and provides the infrastructure automation solution to several projects such as ENVRI-FAIR, CLARIFY and ARTICONF.

You will closely collaborate with domain scientists from the domains of ecosystem and biodiversity in the groups of the Biogeography & Macroecology (BIOMAC) lab (http://biomac.org/) and the Department Theoretical and Computational Ecology (http://ibed.uva.nl/research). It is expected that your work results in scientific papers, and that you participate and present the research at LifeWatch and other international meetings.

The ideal candidate should meet the following requirements

- A Master or PhD degree in computer science or a related discipline;
- Strong interests in learning new technologies;
- willingness to work in a multidisciplinary team (ecology, computer science; software engineering)
- ability to speak and communicate in English at an academic level both verbal and written;
- is experienced in one or more major preprograming languages (e.g. Java, Python)
- familiar with UNIX/Linux environment
- up-to-date knowledge about various software development and deployment tools including minimally Git/GitHub
- experience with Cloud computing and big data

Of additional advantage:

- Experience with web applications and libraries (e.g., HTML, JavaScript, and PHP)
- Knowledge of DevOps tools such as Docker and Kubernetes

The call for interest is subject to the following procedure

Further information

Interested? For more information on this position please contact:
Dr Zhiming Zhao, assistant professor, Multiscale Networked Systems (daily supervisor), Email: z.zhao@uva.nl ; Visit https://staff.fnwi.uva.nl/z.zhao/

Appointment

We offer a position for 38 hours a week in an exciting, dynamic and international research environment, starting as soon as possible. The full-time appointment will be on a temporary basis for a maximum period of 2 years with opportunities for an extension.
The Collective Labour Agreement for Dutch Universities will be applicable for salary. The annual salary will be increased by 8 % holiday allowance and 8.3 % end-of-year bonus. You will participate in the LifeWatch-ERIC Netherlands pension scheme with RESAVER.

Job application

Applications should include the following documents, all in one PDF file and in the following order:

- motivation letter (max. 1-2 pages, containing your motivation for applying and a description of your previous research experience);

- list of your 2-3 most significant publications or systems(incl. a short description in 2-3 sentences what is interesting in each paper);

CV (with applicant's e-mail address and telephone number, documentation of education and complete publication list, and contact details of two professional references [name, address, telephone and email]. References will only be contacted if the candidate is short-listed. Applications should be sent ultimately at 31 August 2020 to z.zhao@uva.nl with the job title in the subject field.