



# COMPUTING SCIENCE.

## **DESY, Zeuthen location, is seeking: Computing Scientist (f/m) Contribute to the design and implementation of an OpenStack based cloud infrastructure**

### **DESY**

DESY is one of the world's leading research centres for photon science, particle and astroparticle physics as well as accelerator physics.

The Data Processing group is responsible for the IT infrastructure of DESY in Zeuthen. We aim for an OpenStack cloud environment for basic services of the data center, software development and testing, data acquisition and processing as well as Grid and High-Throughput computing. A green-field proof-of-concept installation is therefore planned to evaluate and optimize OpenSource technologies.

The successful candidate has a strong background in computer and natural sciences, broad knowledge of current concepts of Data Center systems management, and in-depth experience in Linux virtualization, software defined storage and networks. The candidate will be integrated in the DESY Zeuthen computing center environment, collaborate with the DESY teams in Hamburg, and take responsibility also for security in accordance with the DESY computing rules.

### **The position**

Work in a team designing and implementing an OpenStack based IaaS-Cloud with

- Automated installation and configuration of components, including a Ceph storage cluster
- Procedures for upgrades without service interruptions
- Carefully tested and optimized software-defined networks (e.g. VXLAN, OpenVSwitch, MidoNet), including acceleration and offloading of functions to hardware
- Thoroughly benchmarked and fine-tuned components for the above mentioned use cases, including trade-offs between contradicting requirements
- Container orchestration (e.g. Kubernetes) both as potential platform for OpenStack components as well as workload on the cloud system
- Well selected and tested optional As-a-Service components from the OpenStack big tent
- Tested options to scale the production system locally and into a hybrid cloud

### **Requirements**

- Master/Diploma degree in computer or natural sciences and possibly a PhD
- Deep experience in secure Linux system administration and networking, esp. technologies underlying OpenStack, Kubernetes and Ceph
- Ideally in-depth, hands-on knowledge of OpenStack, Docker, Kubernetes, OpenVSwitch and Ceph
- Unix shell script programming, configuration management (e.g. Puppet, Ansible), and version control (e.g. Git, Gitlab)
- Experience with Continuous-Integration and -Deployment systems is a plus
- Acquaintance with Perl, Python and C/C++ software development and debugging
- Experience with Linux and network measurements and monitoring, deep analysis

For further information please contact Dr. Peter Wegner (Peter.Wegner@desy.de)

The position is limited to 2 years.

Salary and benefits are commensurate with those of public service organisations in Germany. Classification is based upon qualifications and assigned duties. Handicapped persons will be given preference to other equally qua-

lified applicants. DESY operates flexible work schemes. DESY is an equal opportunity, affirmative action employer and encourages applications from women. Vacant positions at DESY are in general open to part-time-work. During each application procedure DESY will assess whether the post can be filled with part-time employees.

We are looking forward to your application quoting the reference code preferably via our electronic application System: Online-Application

**Deutsches Elektronen-Synchrotron DESY**

Human Resources Department | Code: FHMA046/2017

Notkestraße 85 | 22607 Hamburg | Germany | Phone: +49 40 8998-3392

**Deadline for applications: 12 January 2018**

**[www.desy.de](http://www.desy.de)**

---

**HELMHOLTZ** RESEARCH FOR  
GRAND CHALLENGES