Scientific Computing at the URZ

Using the wealth of large, heterogeneous, distributed research data intelligently is a central challenge of our time and clears the way to new scientific breakthroughs in natural and social sciences and liberal arts.

The University Computing Center is supporting researchers and students of the University of Leipzig meeting these challenges and develops and operates a differentiated portfolio for scientific computations. The Sirius Cluster gives users access to the newest big data technologies.

The Big-Data-Cluster Sirius

The Sirius cluster comprises two servers with more than 250 cores, 12 terabytes RAM and high-speed data transfer via Infiniband. The available large memory capacity suggests applications like in-memory databases in the big-data sector or applications with special requirements, as used for example in bioinformatics.

Please be aware that all applications may only use the resources for a predefined time period. Prioritized as well as exclusive usage scenarios for big-data research or performance benchmarking are possible as well.

Access and Usage

The access to the cluster requires a few small steps:

1. Tell us about your requirements via e-mail to scadm@uni-leipzig.de
2. Using your university account create a dedicated SC-login via the registration portal https://register.sc.uni-leipzig.de
3. If you need exclusive access or additional resources/software please tell us about it
4. The access to the cluster uses SSH, originating from the university network via the gateway galaxy101.sc.uni-leipzig.de
5. Start your jobs and programs according to the preplanned schedule
6. Please clean up your files when you are done

Please include a reference to the cluster in your subsequent scientific publications.

Current State and Expansion Phases

The Sirius cluster is available with this basic configuration:

- Operating system CentOS 7.3
- Java 1.8, Python 2.7
- Docker 17.

The cluster is getting expanded over time. Currently we are working on the following expansions:

- Integration into the Slurm management
- Extended project management interface
- Support for Singularity

Version as of 25.10.2018

Contact: If you have further questions, we are pleased to be of service to you by telephone or e-mail. We are looking forward to discuss your requests:

- Dr. Stefan Kühne (URZ Forschung/Entwicklung): 97-32360
- Vadim Bulst (URZ Infrastruktur): 97-33380
- Lars-Peter Meyer (ScaDS Dresden/Leipzig): 97-39518

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