Fact sheet on applications for GCS/HLRS computing time projects on Hazel Hen and Hawk

1. Prospective users can apply for computing time on Hazel Hen. Depending on the demand of compute time, there are two different ways for the application:
   - Applications for Large-Scale projects requiring more than 35 million core hours in a one year time frame can apply twice a year at defined periods of time. The dates for the next call can be found on the GCS webpage. The call deadlines are strict deadlines, applications submitted after the call deadline will be rejected.
   - Applications for smaller projects can be submitted at any time. Please find instructions on the HLRS web page.

   Applications are accepted *online only*. Applications via email *will not be accepted*.

2. Scientists with a high demand for computing time *are explicitly encouraged to apply for a GCS-Large Scale project*. If the application is not granted as a GCS-LS project it is automatically considered as a regular HLRS project. Therefore, *there are no disadvantages for the applicants* submitting a large scale project.

3. Eligible are scientists employed at universities or research facilities in Germany. Here, the nationality of the applicant ("Principle investigator, PI") does not play a role. Applicants from Europe but outside of Germany are advised of the possibility to apply at PRACE. The PI of a project must have a proven scientific record (preferable a PhD or comparable degree) and must be able to successfully accomplish the proposed tasks.

4. Available Systems

   Hazel Hen will be replaced by Hawk during this allocation period, availability is planned for early 2020. The major part of the requested allocation shall be used on Hawk. **Applicants are requested to port their applications to the new platform soon after the allocation decision.** HLRS support is available and required support should be outlined in the project application. As Hazel Hen will be reduced in size to provide space for Hawk, only a quite limited part of the allocation can be used on Hazel Hen.

   Overview Hawk

Hawk (Highly parallel system with a 9D-hypercube interconnect)	
Avail. core-h/call	ca. 600 million
Processor	AMD® Rome®
Nodes	5000, 128 cores per node
Memory	128 GB/node; 256 GB/node on 200 nodes
Interconnect	Infiniband

   Hazel Hen Overview:

Hazel Hen (Massively parallel system with a unique fast interconnect)	
Processor	Intel® Xeon® CPU E5-2680 v3 (30M Cache, 2.50 GHz)
Nodes	7712, 185.088 processor cores
Memory	128 GB/node; 5.3 GB/core
Interconnect	Aries Dragonfly network

5. Important Remarks
   - Hazel Hen and Hawk provide a fast and expensive interconnect as they are homogenous large scale HPC system for scaling applications. Therefore
     - a good scalability of the application has to be shown
     - job farming is not an approbate way to use a large number of nodes in parallel on that system.

- o The file system is a shared resource. Not well behaving applications have a significant impact on other running applications. Therefore
  - provide information about your I/O strategy
  - make sure not to use a large number of small files with your application
- o Regular operation includes waiting times for jobs as well as maintenance phases. Therefore, please make sure to be able to execute the job set according to your work plan in about 2000 hours wall clock time per year.

6. For the preparation of the requested project description, please ***use the template*** which is available in Word, LaTeX and PDF and adhere to the guidelines given on the GCS webpage Since the templates may change from call to call make sure to use always the latest version using the links above. Please be aware, that the size of the description is limited to ***18 pages (font size 12pt) and 60 MB***. In case you apply for a project extension, please also upload the status report (max. 10 pages) ***as a separate file*** (PDF). Please ***use the template*** which is available in Word, LaTeX and PDF.

7. For more details please refer to the HLRS web site