Quick Reference Card for
University of Bonn

Guidelines for the Application, Approval and
Allocation of HPC-Resources at University of Bonn
`https://www.hpc.uni-bonn.de/en`
document created by `https://hpc.dh.nrw`

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Access Conditions

HPC Systems:

- Main HPC cluster Marvin (`https://www.hpc.uni-bonn.de/en/systems/marvin`)
- For smaller projects: GPU system Bender (`https://www.hpc.uni-bonn.de/en/systems/bender`) Note: No external users possible.

Who can access Marvin?

- Employees of Uni Bonn
- Students of Uni bonn (with an employee as a supervisor)
- External project partners (with an internal employee as a supervisor)

Conditions
Compute time on Marvin is allocated to research groups. Therefore the **group leader** (professor, project PI, etc.) must register as well.
Access is for 6 months (students, externals) or 12 months (employees), but can be extended.

Project Preparation

Most importantly, make sure you understand **your responsibilities** (`https://wiki.hpc.uni-bonn.de/getting_started#your-responsibilities`).
We offer **training courses and consulting**. See `https://www.hpc.uni-bonn.de/en/support/overview`. We especially recommend that every user attend the **Cluster Introduction course**.
When applying, please provide a short project description and, if possible, an estimate of required resources, e.g. Core-h, memory, etc.

Proposal Submission

Apply via the online registration form available at `https://www.hpc.uni-bonn.de/en/systems/marvin-registration`.

Formal Evaluation

The HPC Team will check formal aspects of your application and contact the specified PI to verify the request. If questions or problems arise, you will be contacted.

Technical Review

The HPC Team will check technical aspects (required resources, software, etc.) of your application.

Scientific Review

Typically **no in-depth review** of your use case will be necessary upon registration.
You can get consulting and advice from us, see `https://www.hpc.uni-bonn.de/en/support/overview`.

Resource Allocation and Monitoring

Fair-share allocation: Jobs are assigned a priority depending on the compute resources (Core-h, GPUs, RAM) recently used by the research group.
User accounts are associated to fair-share quotas of (possibly multiple) research groups. Thus, no user-specific fair-share quotas are assigned. Group leaders can add and remove group members via our online portal, see `https://wiki.hpc.uni-bonn.de/en/research-groups`our Wiki.

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Glossary of Terms and Definitions

Core-h A core-hour (Core-h) is a unit used for the accounting of compute cluster resources. One core-hour equals one CPU core being used for the duration of one hour of execution time. The latter is always measured as the elapsed wall clock time from the job start to the job finish and not as the actual CPU time. For exclusively scheduled jobs (i.e., jobs using the complete node), the used core-hours usage are always equal to the total number of CPU cores on the allocated nodes times the execution time, regardless of the actual number of node slots allocated to the job.

HPC High-performance computing.

PI The principal investigator (PI) is responsible for all legal and scientific aspects of a project as well as project application and the project execution. He/She has to be a professor or junior professor at a university. Execeptions to this rule are possible but have to be justified in the project proposal. He/She has to make sure that citizens of countries that are subject to the export control policy of the German Federal Government have an additional authorization from the German Federal Office for Economic Affairs and Export Control (BAFA) before they are allowed to use the compute resources of the project.