

## Fact sheet on applications for JARA/VSR computing time projects

Important changes with respect to previous calls are marked in red

1. Prospective users can apply for computing time twice a year at defined periods of time. The dates for the next call can be found on the website of the [JARA partition](#).
2. Eligible are scientists of the RWTH Aachen and Forschungszentrum Jülich. The principle investigator (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.
3. Projects which will expire in the ending allocation period can be extended in the upcoming allocation period. On-going projects **cannot be extended** in the upcoming call.
4. Applications are accepted **online only**. Applications via email **will not be accepted**. The call deadlines are **strict deadlines**, requests for applying after the call deadline **will be rejected**.
5. **Important note for users of HCP-Systems located at JSC (JURECA):** JSC introduced a new, user-centered model for using the supercomputing systems. Each user has only one account. Via this account all assigned projects can be accessed. In addition, data projects were introduced besides the known computing time projects. Computing time resources will continue to be requested through computing time projects and these projects continue to have access to a scratch file system (without backup) and a project file system (with backup). Access to the tape-based archive, however, is only possible via data projects. In addition, data projects provide access to various additional storage layers; however, they are not equipped with a computing time budget. For a fact sheet on data projects and to apply for data projects please see <https://application.fz-juelich.de/Antragsserver/dataprojects/WEB/application/login.php?appkind=dataprojects>. For further information see the [usage model website](#), contact the user support ([sc@fz-juelich.de](mailto:sc@fz-juelich.de)) or contact the coordination office for the allocation of computing time ([coordination-office@fz-juelich.de](mailto:coordination-office@fz-juelich.de)).
6. Please fill out the sections of the online application form considering the following information:
  - **Section Application list:** If you have an extensible project (see point 3. of this fact sheet) and you would like to continue studies on the topic of the project, please extend this project by providing the corresponding project ID and click on EXTEND, otherwise, on NEW. **Important change:** Please note that GCS/NIC project applications are no longer available in this list. If you would like to extend or reuse one of your former GCS/NIC project applications, please login to <https://jards.gauss-centre.eu/gcshome/>, export the corresponding application and import the data in the **Section Resources** for JURECA applications or in the **Section Show data PI** for CLAIX applications.
  - **Section Project Data:** Please fill out the point "Other applications for computing time" carefully - incomplete information may lead to a significant cutback of resources or even to the rejection of the proposal. Please provide this information in the online form only and not in the project description.
  - **JURECA:** You have to specify your requests for each resource you are applying for (CPU, GPU, MIC) separately in the corresponding resource panels of the on-line application form. The performance and scaling data as well as the justification for the kind and amount of resources requested must be discussed in detail also separately for each resource (CPU, GPU, MIC) you are applying in the project description.
  - **Section Upload files:** Please upload here your detailed project description in PDF. Please use the template which is available for [Word](#), [LaTeX](#) and in [PDF](#) and observe the [guidelines](#). 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 60MB. In case you apply for a project extension, please upload here also the status report as a separate file (PDF). Please use the template which is available for [Word](#), [LaTeX](#) and in [PDF](#). The status report is limited to 10 pages (font size 12pt) and 60MB.
  - **Section Finalize:** After pressing the FINALIZE button you will get back to the application list. Here you can find this application in the list of "finalized applications". Please use the PRINT button for printing the application form, sign the form and send it to the Coordination Office for the Allocation of Computing Time preferred by email ([coordination-office@fz-juelich.de](mailto:coordination-office@fz-juelich.de)). Sending it additionally by regular mail is not necessary.

7. Available systems and resources per call

CLAIX (Cluster Aix-la-Chapelle)		
Compute Section	Node Configuration	Available Resources
CLAIX-2016-MPI	Two Intel E5-2650v4 processors "Broadwell", (2.2 GHz, 12 cores each), 24 cores/node <ul style="list-style-type: none"> <li>128 GB main memory (~5 GB main memory/core)</li> </ul>	~50 million core-h <sup>1)</sup>
CLAIX-2016-SMP	Eight Intel E7-8860v4 processors "Broadwell", (2.2 GHz, 18 cores each), 144 cores/node <ul style="list-style-type: none"> <li>1 TB main memory (~7 GB main memory/core)</li> </ul>	~5 million core-h <sup>1)</sup>
CLAIX-2018-MPI	Two Intel Xeon Platinum 8160 Processors "SkyLake" (2.1 GHz, 24 cores each), 48 cores/node <ul style="list-style-type: none"> <li>192 GB main memory (~4 GB main memory/core)</li> </ul>	~95 million core-h <sup>1)</sup>
Remarks		
<p><b>At least 2.4 million core-hours <i>have to be requested per proposal</i>.</b> Applicants requesting less resources must apply for resources on CLAIX via the <a href="#">simplified application process</a>. In order to compensate for the difference in speed between CLAIX-2016-MPI and CLAIX-2018-MPI the resources assigned to your project by the JARA commission will be increased by 50% by the IT Center when your project is assigned to CLAIX-2016-MPI. All CLAIX projects will also be able to launch jobs on the small CLAIX-2016-SMP section, if the request is justified in the project application. Please specify the fraction of resources for your project on this resource in your application, if applicable. For further details about CLAIX, please visit the <a href="#">website</a> of the JARA partition.</p>		
Hint <sup>2)</sup>		
Approx. 30 applications were competing for the given CLAX2016 resources on average in the past.		
Direct link to apply for CLAIX resources		
<a href="https://application.fz-juelich.de/login?appkind=jaraclaix">https://application.fz-juelich.de/login?appkind=jaraclaix</a>		

<sup>1)</sup> For researchers of the RWTH Aachen and FZ Jülich

<sup>2)</sup> Provided to help applicants to estimate how many core-h can be *realistically* requested per application.

JURECA (Jülich Research on Exascale Cluster Architectures)		
Module	Node Configuration	Available Resources
Cluster Module <ul style="list-style-type: none"> <li>CPU</li> </ul>	Two Intel E5-2680v3 processors "Haswell", (2.5 GHz, 12 cores each), 24 cores/node <ul style="list-style-type: none"> <li>1605 nodes: 128 GB main memory (~5 GB memory/core)</li> <li>128 nodes: 256 GB main memory (~10 GB memory/core)</li> <li>64 nodes: 512 GB main memory (~20 GB memory/core)</li> </ul>	~100 million core-h <sup>1)</sup>
Cluster Module <ul style="list-style-type: none"> <li>GPU</li> </ul>	Two Intel E5-2680v3 processors "Haswell", (2.5 GHz, 12 cores each), 24 cores/node, 2 NVIDIA K80 <ul style="list-style-type: none"> <li>75 nodes: 128 GB main memory (~5 GB/core) + two times 24 GBGDDR5 memory</li> </ul>	~4.7 million core-h <sup>2)</sup>
Booster Module <ul style="list-style-type: none"> <li>MIC</li> </ul>	One Intel Xeon Phi 7250-F Knights Landing processor (1.4 GHz, 68 cores), 68 cores/node <ul style="list-style-type: none"> <li>1640 nodes: 96 GB main memory + 16 GB MCDRAM high-bandwidth memory</li> </ul>	~80 million core-h <sup>2)</sup> ~60 million core-h <sup>3)</sup>
Remarks		
<p><b>Cluster Module (CPU)</b> Resources are primarily available for researches of the FZJ. Researchers of the RWTH Aachen can only apply for this module if they use this module in combination with the JURECA Booster Module. A detailed and convincing work plan must justify the need to apply for this module.</p> <p>Projects requesting only up to 2.4 million core-h might consider to apply for resources on CLAIX via the simplified application process.</p> <p><b>Cluster Module (GPU)</b> On nodes with GPUs host core-hours are accounted.</p> <p>For further details about JURECA, please visit the <a href="#">website</a> of the JARA partition or the <a href="#">JURECA website</a>.</p>		
Hints <sup>4)</sup>		
<b>Cluster Module (CPU)</b>	Approx. 45 applications were competing for the given resources the past.	
<b>Cluster Module (GPU)</b>	Approx. 10 applications were competing for the given resources in the past.	
<b>Booster Module (MIC)</b>	Approx. 20 applications were competing for the given resources in the past.	
Direct link to apply for JURECA resources		
<a href="https://application.fz-juelich.de/login?appkind=jarajureca">https://application.fz-juelich.de/login?appkind=jarajureca</a>		

<sup>1)</sup> For researchers of FZ Jülich, see remarks about information for researchers of the RWTH

<sup>2)</sup> For researchers of the RWTH Aachen and FZ Jülich together

<sup>3)</sup> For researchers of FZ Jülich additionally

<sup>4)</sup> Provided to help applicants to estimate how many core-h can be *realistically* requested per application.

## Collection of relevant links

### **Call information and applications**

JARA partition

<https://www.jara.org/en/research/hpc/partition-jade>

<https://www.jara.org/en/research/hpc/partition-jade/computing-time>

Simplified application procedure for projects with  $\leq 2.4$  million core-hours on CLAIX

<https://www.itc.rwth-aachen.de/hpc-project>

Application for JARA/VSR resources

<https://application.fz-juelich.de/jara/application/>

Direct link to apply for CLAIX resources

<https://application.fz-juelich.de/login?appkind=jaraclaix>

Direct link to apply for JURECA resources (Cluster Module CPU, Cluster Module GPU, Booster Module MIC)

<https://application.fz-juelich.de/login?appkind=jarajureca>

GCS (Applications with requests of  $\geq 35$  million core-hours)

[https://www.gauss-centre.eu/gauss-centre/EN/Home/home\\_node.html](https://www.gauss-centre.eu/gauss-centre/EN/Home/home_node.html)

**Application for data projects at JSC**

<https://application.fz-juelich.de/Antragsserver/dataprojects/WEB/application/login.php?appkind=dataproyects>

**Information about the new usage model at JSC**

[https://fz-juelich.de/ias/jsc/EN/Expertise/Supercomputers/NewUsageModel/NewUsageModel\\_node.html](https://fz-juelich.de/ias/jsc/EN/Expertise/Supercomputers/NewUsageModel/NewUsageModel_node.html)

### **Descriptions of the available HPC systems**

<https://www.jara.org/en/Partition-computers>

### **Templates for project descriptions**

Word

<https://www.jara.org/files/jara/bilder/JARA-HPC/Partition/Dokumente/Project%20Application/JARA-HPC-Template-project-application.docx>

LaTeX

<https://www.jara.org/files/jara/bilder/JARA-HPC/Partition/Dokumente/Project%20Application/Template-project-application-latex.tar>

PDF

<http://www.jara.org/files/jara/bilder/JARA-HPC/Partition/Dokumente/Project%20Application/JARA-HPC-Template-project-application.pdf>

### **Templates for Status and final reports**

Word

<https://www.jara.org/files/jara/bilder/JARA-HPC/Partition/Dokumente/Status%20Report/JARA-HPC-template-final-status-report.docx>

LaTeX

<https://www.jara.org/files/jara/bilder/JARA-HPC/Partition/Dokumente/Status%20Report/JARA-HPC-template-final-status-report-latex.tar>

PDF

<https://www.jara.org/files/jara/bilder/JARA-HPC/Partition/Dokumente/Status%20Report/JARA-HPC-template-final-status-report.pdf>