



PRACE – Partnership for Advanced Computing in Europe

Guide for Applicants to Tier-0 Resources

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References and Applicable Documents

- [1] <http://www.prace-ri.eu/Call-Announcements>
- [2] <http://www.prace-ri.eu/>
- [3] <http://www.prace-ri.eu/PRACE-Resources>
- [4] <http://www.prace-ri.eu/Organisation>
- [5] peer-review@prace-ri.eu
- [6] bod@prace-ri.eu
- [7] <http://www.prace-ri.eu/Information-for-PRACE-Awardees>
- [8] <http://www.prace-ri.eu/Information-for-Reviewers>
- [9] <http://www.prace-ri.eu/Confidentiality-and-Conflict-of>
- [10] <https://prace-peer-review.cines.fr/>

List of Acronyms and Abbreviations

BoD	PRACE Board of Directors
PRACE	Partnership for Advanced Computing in Europe



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1 Introduction

PRACE, the Partnership for Advanced Computing in Europe provides access to world class computing and data management resources and services. The resources are available to all successful applicants who submitted their proposals to one of the PRACE Calls for Proposals. This *Guide for Applicants* provides detailed information on preparing applications for Tier-0 resources and the peer-review that follows the submission. Post-award obligations include a final report and acknowledgement of PRACE support. Information about PRACE calls is available in the call texts (see [1]).

This document is mainly a compilation of information that is also available directly on the PRACE website [2]. Its main purpose is to collect all this information in a single, printable document. It is structured as follows:

Section 2 contains an overview of the PRACE peer-review, its underlying principles, and the phases of the process: technical and scientific assessment, right to reply.

Section 3 summarises the prioritisation and resource allocation that follows the review. It also explains the three different types of access that PRACE is granting: preparatory, project and multi-year access.

Section 4 provides information for successful applicants.

Section 5 contains information for the scientific reviewer. While this is aimed at the reviewers, it may also be useful for applicants and is therefore included here.

It is of utmost importance to note that this *Guide for Applicants* is not the only source of information that an applicant needs to consult to write eligible and successful proposals. The following information is also essential:

- **Call for proposals** on the PRACE website [1]. This page provides a list of open calls, and for each call a document defining the scope of the call, available systems and resources, eligibility criteria, specific information for applicants and deadlines.
- **PRACE Resources** on the PRACE resources website [3]. This page contains more information about the Tier-0 systems.
- **Online proposal submission** (also known as *online application form*) accessible through the online PRACE Peer Review Tool [1]. This set of web-forms allows applicants to create, edit and submit proposals. Carefully read and follow the instructions on this webpage and provide all mandatory information (marked with a red box). Applicants are strongly encouraged to create a proposal as early as possible and closely look at what is requested, since it may take some time to prepare or gather parts of that information. Please note that a proposal has to be *submitted* before the call deadline



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to be included in the peer review process. After submission, proposals can still be *unsubmitted*, edited and submitted again, until the Call deadline.



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2 Peer Review

2.1 Principles

The PRACE peer-review process is based on the following principles:

- **Transparency:** The peer-review process is transparent and clear to all stakeholders in PRACE, including funding agencies of all member countries and users from research institutions and industry.
- **Fairness:** Proposals are evaluated on merit and potentially high impact on European and international science and economy.
- **No parallel assessment:** The PRACE peer-review process builds on the experiences and best practices of national and international institutions and constitutes a centralised peer-review exercise recognised by all PRACE partner countries and scientific communities.
- **Reviews** are done by experts in the scientific field of the proposal, with no declared conflict of interest, based on criteria published in the call and with a periodic reshuffling of reviewer's appointments.
- **Confidentiality:** Proposals will be treated in confidence by PRACE peer-review staff and reviewers. The identities of the peer-reviewers shall not be disclosed.
- **Right to reply** to technical and scientific evaluations.

2.2 Assessment process

The PRACE peer-review consists of two phases of assessment: technical and scientific. The two assessments are carried out separately by different groups of experts. The technical review precedes the scientific review and seeks to assure that the proposal is technically feasible for the intended platform requested. At the end of each peer-review assessment phase, each applicant has the opportunity to reply to the issues raised during the evaluation of both the technical and the scientific reviewers (if necessary).

2.2.1 Technical assessment

A proposal must fulfil the following criteria:

- The **need** to use a PRACE resource.
- **Software** availability on the requested resource. The codes necessary for the project must be available on the system requested and/or, in case of codes developed by the applicants these must be sufficiently tested for efficiency, high scalability, and suitability. For Single-Year and Multi-Year Project Access Proposals, proof of successful tests must be submitted together with the proposal.



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- **Feasibility** of the requested resource. The proposed project must be suited for the requested system. The technical assessment may redirect projects to a more appropriate system.

All three criteria must be fulfilled in the application. Reviewers will assess proposals against these criteria. During the technical assessment an increase or decrease in the requested resources can be put forward for consideration by the prioritisation panel.

The technical assessment may result in one of three outcomes:

- **Strongly recommended:** The application fulfils all technical requirements related to the selected platforms.
- **Recommended:** The technical review confirms the adequateness of the application for the selected platform, but some clarification may be required from the applicant.
- **Proposed for rejection.** The proposal is recommended for rejection as it is not technically possible/feasible to run the codes on the requested platform.

During the technical assessment, an increase or decrease in the requested resources can be put forward for consideration by the scientific reviewers and/or prioritisation panel.

The outcome is then passed on to the scientific reviewers and the prioritisation panel.

2.2.2 Scientific assessment

Scientific review is performed by internationally recognised experts in the field of science of the proposal. During the scientific assessment an increase or decrease in the requested resources can be put forward for consideration by the prioritisation panel.

The proposals must address the following scientific criteria:

- **Scientific excellence:** the proposed research must demonstrate scientific excellence and a potentially high European and international impact.
- **Novelty and transformative qualities:** the proposal should be novel, develop an important scientific topic of major relevance to European research, describe possible transformative aspects, and expected advances.
- **Relevance to the call:** the proposal needs to address how the research is addressing the scope of the call if a specific scope is stated in the call.
- **Methodology:** the methodology used should be described and be appropriate to achieve the goals of the project;
- **Dissemination:** the planned channels and resources for dissemination and knowledge exchange should be described. The applicant and the collaborators must include a list of recent publications relevant to the proposed project.



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- **Management:** there must be a solid management structure in place, which will ensure that the project will be successfully completed.

These criteria should be fulfilled in the application. Reviewers will assess proposals against these criteria.

2.3 Role of Reviewers

The PRACE staff handling the peer-review process (hereafter identified as *PRACE peer-review staff*) is responsible for obtaining high quality non-conflicted technical and scientific reviews for each proposal.

The technical reviewers are experienced technical experts in PRACE HPC systems and software. Technical reviewers will provide a report on the technical quality (code, methodology, etc.) of proposals, on the suitability of the project for the system/architecture requested, and on the extent of the request.

The scientific reviewers are researchers from academia or industry with proved track record expertise in the scientific field of the proposal. One of the reviewers, but no more than one, may be chosen from the list of reviewers suggested by the applicant (on the online form). The PRACE peer-review staff will seek to assure that each proposal is evaluated by non-conflicted reviewers that are experts in at least one aspect of the proposal and together can provide an expert view on the entire scientific case presented. Scientific reviewers will provide a report on the novelty and quality of the research proposed, its potential impact and on the applicant's ability to carry it out. They will also assess the proposal based on its fulfilments of any pre-defined criteria for a particular call.

The identity of the technical and scientific reviewers will be known only to the PRACE peer-review staff and will not be disclosed to the applicant and/or others involved in the process.

The reviewer's appointment requires explicitly that the details of the applicants and the details of their proposals must be kept confidential.

2.4 Applicant right to reply

If the reviewers have queries and/or raise issues regarding a proposal, the reviewer's report (technical and scientific) will be sent to the applicant for an opportunity to respond, correcting any factual inaccuracies or providing any necessary further information in response to issues that the reviewers may have raised. The reviewer report will be anonymised before being sent to the applicant. The applicant will be given a deadline to respond to the reviewers' comments. The applicant's response to the reviewer's reports will be sent to the prioritisation panel together with the reviewers' reports.



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3 Resource Allocation

3.1 Prioritisation of proposals

After technical and scientific assessments, proposals are forwarded to the PRACE Access Committee (AC) that makes a recommendation for resource allocation to the PRACE Board of Directors (BoD). The PRACE AC seeks to allocate available resources to qualified proposals so as to best meet the PRACE objectives.

The PRACE AC is composed of eminent scientists from the PRACE scientific community. The members will primarily be selected from PRACE partner countries, but scientists from other countries may also be chosen if deemed necessary or desirable. The composition of the PRACE AC is available on the PRACE website [4].

The PRACE AC will analyse the technical and scientific review reports together with any applicants' response in producing a single ranked list for each call for proposals. Single-Year and Multi-year Project Access proposals are ranked in the same list. The PRACE AC takes into account the advice of the technical and scientific assessments regarding amounts of resources requested or desirable for each proposal in making its recommendation to the PRACE BoD on the resources to be allocated to each proposal.

The PRACE AC prepares the ranked list in a face-to-face meeting with all its members.

3.2 Allocation

3.2.1 Preparatory Access

Proposals for *Preparatory Access* undergo only technical assessment. This assessment is directly handled by the PRACE HPC centres technical teams that take the decision on resource allocation. Applicants will be promptly informed about the outcome of their application. The allocated resources are based on the recommendations of the technical reviewers regarding resources required for the proposed activity, available resources and may differ from those requested. If expert support has been requested, applicants will be contacted by the assigned expert. Information on Preparatory Access is available on the PRACE website [1].

3.2.2 Single-Year and Multi-Year Project Access

For Single-year and Multi-year Project Access, the PRACE AC will recommend resource allocations to the PRACE BoD. PRACE will allocate resources such that PRACE objectives are maximized which typically means that resources are allocated in rank order until available resources are exhausted, or the list of proposals deemed of sufficient quality for resource allocation has been exhausted. The applicants will be promptly informed if their proposal has been awarded or not. They will also be informed of the amount of resources that they have been awarded (which may have been altered by the PRACE AC). Information on Single-Year and Multi-Year Project Access is available on the PRACE website [1]



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3.2.3 Changes and extensions

Applicants must inform PRACE promptly of any changes to a successful proposal, either regarding the amount of resources needed or the distribution of the usage time within the schedule. Requests for the extension of the allocation period need to be fully justified and will be analyzed by PRACE on a case by case basis. Extension will only be considered in the event of unforeseen technical issues at the HPC hosting site which would prevent the user from accessing the awarded HPC resources. The awarded resources (total computer time and/or expert support) cannot be increased. All notifications of changes or requests for extensions should be sent to PRACE peer-review staff via email [5].

3.3 Applicants right to appeal

All PRACE allocation/rejection decisions are final. Nevertheless, applicants who have concerns about the review of their application may contact the PRACE peer review staff via email [5] within two weeks after receiving the decision. The PRACE peer review staff will respond by providing clarifying information as needed about the peer review process and the PRACE final decision.

Please only contact the PRACE peer review staff via email [5] if it is not clear, from the reviewers' comments, where the flaws in the proposal were. High quality proposals may not be allocated resources because of resource limitations.

If, following clarifications from the PRACE peer review staff, the applicant still has concerns about procedural aspects of the review, a formal letter of appeal can be submitted to the PRACE BoD via email [6] no later than one month after receiving the clarifications from the PRACE peer review staff. The PRACE BoD will analyse the applicant's reasons for complaint on a case by case basis and will send a formal reply to the applicant within one month of receiving the appeal.

4 Information for PRACE Awardees

4.1 Final report

All awards (Project access and Preparatory access) require a final report. This report needs to be submitted to PRACE using the PRACE template available at [7]. Final reports for Single-year and Multi-year Project Access must be submitted within 6 months of the end of the project's resource allocation period. Final reports for Preparatory Access must be submitted by the end of the allocation period.

Failure to submit a final report may disqualify future proposal submissions from by any member of the research group.



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If such report is not provided to PRACE within the stipulated period, PRACE may impose to the organisation of the Project leader (also known as Principal Investigator) a sanction consisting of the obligation to compensate for the cost of the resources used during the Period of Availability.

PRACE is allowed to publish the mentioned report as of one year from the termination of the allocation period. The referred period of one year can be extended through a bilateral agreement between PRACE and the applicants. The applicants will allow PRACE to use the mentioned report for dissemination purposes, unless the applicants have declared that their proposal includes confidential information. Copyrighted information will only be published after permission by the copyright holder. Applicants must inform PRACE at the time of application of any confidentiality issues and provide a valid justification for the confidentiality request.

A template for the final report is available for download on the PRACE website [7].

4.2 Acknowledgements

Applicants must acknowledge PRACE in all publications that include results that have been obtained using PRACE resources.

The text for the acknowledgement should not differ significantly from the following text:

We acknowledge that the results of this research have been achieved using the PRACE Research Infrastructure resource [machine name] based in [country] at [site].

Where technical support has been received the following additional text should also be used:

The support of [name of person/people] from [organisation name], [country] to the technical work is gratefully acknowledged.

4.3 User Agreements

Use of PRACE HPC resources requires that users sign a PRACE User's Agreement.

Additional agreements, such as acceptable use policies, may be required by hosting sites.

5 Information for Reviewers

Proposals for receiving PRACE resources are subject to the PRACE peer review process, which consists of a technical review and a scientific review.

Technical reviewers are selected based on experience with PRACE HPC systems and software and preferably an application area. Technical reviewers assess proposals with regard to their feasibility for the requested PRACE system and the appropriateness of the amount of



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requested resources. Technical reviewers may also determine that a PRACE system different from the one requested would be more suitable for the proposed project. The recommendations of the technical reviewers are used by the PRACE AC in assessing and recommending allocation of available resources to proposed projects.

Scientific reviewers are selected based on their expertise in at least one scientific aspect of a proposal. Scientific reviewers may be selected from among reviewers proposed by applicants, but for a given proposal only one reviewer may be selected from the applicant's list of suggested reviewers. Each proposal is reviewed by proved track record experts selected by the PRACE peer review staff seeking to assure as good coverage as possible of the scientific aspects of the proposal. Scientific reviewers work independently from each other and their assessments are submitted to the PRACE peer review staff. The outcomes of the technical and scientific reviews are communicated to the applicants that have a right to reply before the outcome is forwarded to the PRACE AC. Any reply from applicants will be included in the documentation sent to the PRACE AC that will rank the proposals that have gone through the scientific review.

Reviewers' input is the most important element in the peer review process and therefore assessments should be timely, objective, fair and informed. It is essential that reviewers provide constructive criticism with evidence and information to support statements made.

All reviews should be submitted in English.

At the end of the peer review process, a quality check of the reviewers' reports is carried out by PRACE peer review staff supported by PRACE AC to guarantee the quality of reviews.

5.1 Reviewing

Reviewers need to fill out an online form giving their assessment of the proposal based on the criteria of the call and PRACE scientific criteria. A copy of the reviewer's form can be found on the PRACE website [8].

By signing the Appointment letter, each reviewer confirms that he/she has no conflict of interest and that she/he commits to the terms of the "Declaration of confidentiality".

5.1.1 Confidentiality and No-Conflict of interest

Reviewers must treat the proposals that they review in confidence both during and after the review process to maintain the integrity of the peer review process.

If the reviewer is unable to review a proposal due to a conflict of interest, she/he should inform the PRACE peer review staff promptly. PRACE adheres to the conflict of interest policies common to public funding agencies. The PRACE confidentiality and no-conflict of interest form is available on the PRACE Web [9].



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5.1.2 Anonymity of reviewers

To maintain the anonymity of reviewers their comments are communicated to applicants anonymously - reviewers' names do not appear on the evaluation form.

5.1.3 Integrity

To ensure the integrity of the review process, reviewers are not allowed to use any of the information of proposals not already in the public domain for their own gain or that of anyone else.

5.1.4 Feedback to applicants

Applicants will be given the chance to respond in writing to any factual inaccuracies or questions raised by the reviewers. Responses will be sent to the PRACE AC together with the outcomes of the technical and scientific reviews.

5.2 Submission of reviews

Reviewers can access assigned proposals through the on-line PRACE peer review system and fill out the review form on-line [10]. Reviewers can return to the review form to make changes and additions as many times as desired within the indicated time frame. When the review is final, reviewers must submit the review form. The PRACE peer review staff will then be notified that the review is completed and will proceed with the review process.

Reviewers are asked to answer all of the questions and provide reasoning and evidence to back up their assessments.

Reviewers unable to carry out the review within the indicated time frame should inform the PRACE peer review staff immediately so that alternative reviewers may be contacted. In addition, reviewers should also inform the PRACE peer review staff if she/he does not feel qualified to review a proposal.

The peer review process is transparent but anonymous. The assessment procedure does not foresee confidential comments to be withheld from the applicants.