



PRACE 14th Call for Proposals for Project Access

Important Dates:

Opening date:	10/10/2016, 15:30 CET
Closing date:	21/11/2016, 10:00 CET
Administrative check:	21/11/2016 – 25/11/2016
Technical review:	25/11/2016 – 09/12/2016
Scientific review:	25/11/2016 – 20/01/2017
Applicants' reply to reviews:	23/01/2017 – 30/01/2017, 10:00 CET
Allocation decisions:	March 2017
Communication of allocation decision:	End of March 2017
Allocation period for awarded proposals:	01/04/2017 – 31/03/2018
Type of Access	Project Access and Multi-Year Project Access

PRACE systems available:

System	Architecture	Site (Country)	Core Hours	Node Hours
Curie	Bull Bullx cluster	GENCI@CEA (FR)	113 million	7 million
Hazel Hen	Cray XC40 System	GCS@HLRS (DE)	57 million	2.4 million
Juqueen	IBM BlueGene/Q system	GCS@JSC (DE)	350 million	4.6 million
Marconi	Lenovo System	CINECA (IT)	630 million (KNL) 35 million (Broadwell)	9.2 million 1 million
MareNostrum	IBM System X iDataplex	BSC (ES)	316 million	7 million
Piz Daint	Cray XC30 System	CSCS (CH)	476 million	7 million
SuperMUC	IBM System X iDataplex/ Lenovo NextScale	GCS@LRZ (DE)	30 million (SuperMUC 1) 14 million (SuperMUC 2)	1.9 million 0.5 million

Introduction

The Partnership for Advanced Computing in Europe (PRACE) is an international non-profit association (aisbl) with its seat in Brussels. The mission of PRACE is to enable high impact scientific discovery and engineering research and development across all disciplines to enhance European competitiveness for the benefit of society. PRACE seeks to realize this mission by offering a persistent world class high performance computing (HPC) computing and data management resources and services for scientists and researchers from academia and industry in Europe, through a peer review process. The Implementation Phase of PRACE receives funding from the EU's Seventh Framework Programme (FP7/2007-2013) under grant agreement RI-312763 and from the EU's Horizon 2020 research and innovation programme (2014-2020) under grant agreement 653838.

The computer systems (called Tier-0 systems) and their operations accessible through PRACE are provided for this 14th call by 5 PRACE hosting members (BSC representing Spain, CINECA representing Italy, CSCS representing Switzerland, GCS representing Germany and GENCI representing France).

Scientists and researchers from academia and industry can apply for access to PRACE resources. Industrial users can apply if they have their head offices or substantial R&D activity in Europe.

The Call is open to:

***Project Access:** Proposals can be based on a 12-months schedule (**Single-year Projects**), or, on a 24- or 36-months schedule (**Multi-year Projects**). The allocation of awarded resources is made for 1 year at a time with provisional allocations awarded for the 2nd and 3rd year.

Additionally, the Call:

*reserves **0.5% of the total resources available** for this call for **Centres of Excellence (CoE)** as selected by the European Commission under the E-INFRA-5-2015 call for proposals.

The PRACE Access Committee, composed of leading European scientists and engineers, ranks the project proposals that will be awarded access to PRACE resources.

Further details on the standard application procedure can be found on the [PRACE website](#) ("How to apply" menu).

1. Scope of the Call

The PRACE 14th Call for Proposals is intended for large-scale projects of excellent scientific merit and for which a significant European added-value and major impact at International level is anticipated.

Applications to PRACE computing resources must use codes that have been previously tested and that demonstrate application performance and scalability on the PRACE systems required or that demonstrate a requirement for ensemble simulations that need a very large amount of CPU time overall. The focus should be on time-to-solution, efficiency of the solution for the scientific problem, as well as overall resource utilization, rather than just scaling or flop-rate. The need for PRACE computing performance must be clearly spelled out in the proposal.

Further details on the **minimal requirements** for using each system are available on the [PRACE website](#) (“Call Announcement” – document titled ‘**Technical Guidelines for Applicants to PRACE Call**’).

Proposals for code testing and optimisation are outside of the scope of this call. A separate call for **Preparatory Access** is continuously open for such purpose (see the “Call Announcement” page on the [PRACE website](#) for further details about Preparatory Access calls).

Proposals must demonstrate scientific excellence and include elements of novelty and transformative aspects. They must have a recognised scientific impact, validated in a coherent dissemination plan. Possible practical and timely applications are therefore desirable. The proposal should demonstrate the potential of achieving results which will be published in high impact scientific peer-reviewed journals and conferences.

Resources can be requested on a single system or on more than one system (if available). Please note that a proposal asking for resources on more than one system has to clearly justify the need for those resources. The proposal will be either awarded or rejected as a whole (no parts of the proposal can be proposed for awards).

1.1. Projects Access

Project Access is the access to PRACE Tier-0 computing resources for projects which use codes that have been previously tested and have demonstrated high scalability and optimisation.

Proposals for Project Access must be based on computer codes and data ready to run on the Tier-0 systems. They must demonstrate the need for Tier-0 resources. They must demonstrate scientific excellence and focus on topics of major relevance for European research, and include elements of novelty, transformative aspects. They must have a recognised scientific impact, validated in a coherent dissemination plan. Possible practical and timely applications are therefore desirable. The proposal should demonstrate the possibility of achieving results which will be published in high impact scientific peer-reviewed journals and conferences.

For proposals requesting access as a **follow-up to a previous Project Access**, it is **mandatory to present the final report (or a progress report) of the previous project at the time of the closure of the Call**. This report should be sent to the PRACE Peer-Review Team (peer-review@prace-ri.eu)

by the Call deadline date. The report will be analysed by the scientific reviewers and Access Committee members to evaluate the status of the on-going access and whether the need for the follow-up project is acceptable or not.

The **template** document for this report is **available on the [PRACE website](#)** (“Information for PRACE Awardees”), and it must be **carefully respected**.

1.1.1- Single-Year Project Access

Allocations for standard Single-year access will be starting on **April 1st, 2017** for a period of **12 months** (until **31st March 2018**).

1.1.2- Multi-Year Project Access

This PRACE 14th Call for proposals is open to Multi-Year Project Access, inviting applications for 2 or 3 years projects. Multi-Year Projects Access are subject to the same eligibility and assessment criteria as applications for standard single-year Project Access. In addition, proposals must demonstrate their need for a resource allocation of more than a year.

Allocation of resources is **made for one year at a time**, with **provisional allocations** awarded for the 2nd and/or 3rd year. **All Multi-year Access Projects are subject to annual peer review, based on a progress report and a face-to-face meeting. Allocation of resources shall be adjusted accordingly, based on the amount of resources requested in the proposal and the amount of resources (and systems) available in the Call(s) corresponding to the 2nd and/or 3rd year.**

The **total resources** allocated to the Multi-year Access Projects **cannot exceed 10% of the total resources available for * each system* by yearly period.** The total resources allocated to the 2nd and 3rd year of all Multi-year Access Projects cannot exceed 10% of the total resources available for the corresponding system in the next year call (call n+2). Please note that **applicants requiring substantial amounts of resources (i.e. higher than 10% of available resources) for the 2nd or 3rd year will be required to re-apply to subsequent calls (n+2 and/or n+4).**

1.2. Support to CoE

0.5% of the total resources available for this call is reserved for Centres of Excellence (CoE) as selected by the European Commission, under the E-INFRA-5-2015 call for proposals. In order to access these resources, CoEs need to send a request to the peer review team by email at peer-review@prace-ri.eu.

Resources will be equally distributed among the CoEs. They will be asked to provide a description of their usage of the resources for technical validation, and a final report with the obtained results.

The CoE have the same rights and obligations as any other user, as stated in the paragraph on the “Terms of access”.

2. Tier-0 Systems

The PRACE HPC Tier-0 systems available for the 14th Call are

- “ Curie ”	Bull Bullx cluster System	(GENCI@CEA, France)
- “ Hazel Hen ”	Cray XC40 System	(GCS@HLRS, Germany)
- “ Juqueen ”	IBM BlueGene/Q System	(GCS@JSC, Germany)
- “ Marconi ”	Lenovo System	(CINECA, Italy)
- “ MareNostrum ”	IBM System X iDataplex	(BSC, Spain)
- “ Piz Daint ”	Cray XC30 System	(CSCS, Switzerland)
- “ SuperMUC ”	IBM System X iDataplex	(GCS@LRZ, Germany)

- **Curie** – Bull Bullx cluster – hosted by GENCI in TGCC/CEA, Bruyères-Le-Châtel, France. Details and terms of usage can be found [here](#).

The Curie BULLx system is composed by 5 040 compute blades (called thin nodes), each node having 2 octo core Intel SandyBridge EP processors 2.7 GHz, 4 GB/core (64 GB/node) and around 64 GB of local SSD acting as local /tmp. These nodes are interconnected through an Infiniband QDR network and accessing to a multi-layer Lustre parallel filesystem at 250 GB/s. The peak performance of the thin nodes partition is 1.7 petaflops.

The total available capacity in this call for Curie is **113 million** compute core hours,

It is recommended for proposals requesting a **minimum of 15 million** compute hours.

Curie is available for Single-Year Access, Multi-year Access and CoEs.

- **Hazel Hen** – Cray XC40 System – hosted by GCS in HLRS; Stuttgart, Germany. Details and terms of usage can be found [here](#)

Hazel Hen is the new Cray XC40 system (upgrade of Hornet system) and is designed for sustained application performance and highly scalable applications. It delivers a peak performance of 7.42 Petaflops. This new system is composed of 7,712 compute notes with a total of 185,088 Intel Haswell E5-2680 v3 compute cores. Hazel Hen features 965 Terabyte of Main Memory and a total of 11 Petabyte of storage capacity spread over 32 additional cabinets containing more than 8,300 disk drives. The input-/output rates are +/- 350 Gigabyte per second.

The total available capacity in this call for Hazel Hen is **57 million** compute core hours.

It is recommended for proposals requesting a **minimum of 15 million** compute hours.

Hazel Hen is available for Single-Year Access, Multi-year Access and CoEs.

- **Juqueen** – IBM BlueGene/Q Cray System – hosted by GCS in FZJ; Jülich, Germany. Details and terms of usage can be found [here](#)

Juqueen is an IBM BlueGene/Q system that consists of 28 racks and has a peak performance of about 5.9 petaflops. Each rack has 16,384 processing cores with 16 cores forming a node with 16 GB of memory.

The total available capacity in this call for Juqueen is **350 million** compute core hours.

It is recommended for proposals requesting a **minimum of 45 million** compute hours.

Juqueen is available for Single-Year Access, Multi-year Access and CoEs.

- **Marconi** – Lenovo NeXtScale – hosted by CINECA; Italy. Details and terms of usage can be found [here](#)

Marconi system consists of three partitions (from which 2 will be available for Call 14):

- **Marconi – Broadwell** (A1 partition) consists of ~21 Lenovo NeXtScale racks with 72 nodes per rack. Each node contains 2 Broadwell processors each with 18 cores and 128 GB of DDR4 RAM.
- **Marconi – KNL** (A2 partition) will be deployed by the end of 2016 and will consist of 3600 Intel server nodes integrated by Lenovo. Each node contains 1 Intel Knights Landing processor with 68 cores, 16 GB of MCDRAM and 96 GB of DDR4 RAM.

The nodes of both A1 and A2 partitions will be connected via Intel Omni-Path network.

The total available capacity in this call for **Marconi** is:

- On **KNL** partition: **630 million** compute core hours
- On **Broadwell** partition: **35 million** compute core hours

It is recommended for proposals requesting a **minimum of 15 million** compute hours for the **Broadwell** partition and a **minimum of 30 million** compute hours for the **KNL** partition of the system.

Marconi is available for Single-Year Access, Multi-year Access and CoEs.

IMPORTANT REMARK:

Since Omni-Path network and KNL processors are quite new, **it is strongly recommended to applicants to prove that their codes are able to scale at least on similar Intel architectures interconnected at least with Infiniband like fat tree topology.** This will be favourably considered for the technical evaluation of the project. **Further information and support from HPC Technical teams can be requested through PRACE Peer-Review at peer-review@prace-ri.eu during the preparation of the application.**

- **MareNostrum** – IBM System X iDataplex – hosted by BSC in Barcelona; Spain. Details and terms of usage can be found [here](#).

MareNostrum3 is composed of:

- **MareNostrum** is based on Intel Sandy Bridge EP processors 2.6 GHz (two eight-core CPUs, 16 cores per node), 2 GB/core (32 GB/node) and around 500 GB of local disk acting as local /tmp. A total of 36 racks, each with 84 compute nodes. All nodes are interconnected through an Infiniband FDR10 network, with a no-blocking fat tree network topology. MareNostrum has a peak performance of 1.1 petaflops.

MareNostrum4 will replace MareNostrum3 on the mid-2017, this system will be a general purpose processor with a minimum of 2GB/core and a high bandwidth and low latency network connection with up to 100Gbits/s. It will be a minimum of 9 Pflops/s and will be able to run all the current codes available for MareNostrum3 machine.

The total available capacity in this call is:

- **MareNostrum3:** 10 million core hours to be used in April 2017
- **MareNostrum4:** 306 million core hours, to be used from July 2017 to the end of the allocation period, according to the following distribution: 49M for July and August, then 32M from September to February, and finally 16M in March

MareNostrum4 is on procurement process. Once the final configuration is known, more hours could be made available to this call.

It is recommended for proposals requesting a **minimum of 15 million** compute hours.

MareNostrum is available for Single -Year, Multi-Year Project Access and selected CoE.

IMPORTANT REMARK:

Please note that during allocation period, **MareNostrum3** will be replaced by a new system named **MareNostrum4**. All applications running in MareNostrum3 will also be supported on the newer system and for now the terms of access will be the same as for the existing system. **Further information and support from HPC Technical teams can be requested through PRACE Peer-Review at peer-review@prace-ri.eu during the preparation of the application.**

The applicants need to be prepared to move their application codes to the new system during the allocation period. Typically, this means a recompilation, the remaining budget will be transferred to the successor system and if necessary an extension of the allocation period can be considered.

- **Piz Daint** – Cray XC30 System – hosted by CSCS in Lugano, Switzerland. Details and terms of usage will be made available [here](#).

Named after Piz Daint, a prominent peak in Grisons that overlooks the Fuorn pass, this supercomputer is a hybrid Cray XC30 system and is the flagship system for national HPC Service. This supercomputer is a 28 cabinet Cray XC30 system with a total of 5'272 compute nodes. The compute nodes are equipped with an 8-core 64-bit Intel SandyBridge CPU (Intel® Xeon® E5-2670), an NVIDIA® Tesla® K20X with 6 GB GDDR5 memory, and 32 GB of host memory. The nodes are connected by the "Aries" proprietary interconnect from Cray, with a dragonfly network topology.

The total available capacity in this call for Piz Daint is **7 million** compute node hours (**476 million** compute core hours).

It is recommended for proposals requesting a **minimum of 1 million** compute node hours (**68 million** compute core hours).

Piz Daint is available for Single-Year Project Access, Programmatic Access and selected CoE.

IMPORTANT REMARK:

Please note that Piz Daint is going to be upgraded from SandyBridge(CPU)/K20x(GPU) to a Haswell(CPU)/Pascal(GPU) **starting on October 17, 2016**. The new configuration will be announced once the system is installed and in production.

- **SuperMUC** – IBM System X iDataplex – hosted by GCS in LRZ, Garching, Germany. Details and terms of usage will be made available [here](#)

SuperMUC Phase 1 consists of 18 Thin Node Islands with Intel Sandy Bridge processors and one Fat Node Island with Intel Westmere processors. Each Island contains slightly more than 8192 cores. Each of these cores has approx. 1.5 GB/core available for running applications. Peak performance is 3.1 PF. All compute nodes within an individual Island are connected via a fully non-blocking Infiniband network (FDR10 for the Thin Nodes and QDR for the Fat Nodes). A pruned tree network connects the Islands.

SuperMUC Phase 2 consists of 6 Islands based on Intel Haswell-EP processor technology (512 nodes/island, 28 physical cores/node and available memory 2.0 GB/core for applications, 3072 nodes, 3.6 PF). All compute nodes within an individual Island are connected via a fully non-blocking Infiniband network (FDR14). A pruned tree network connects the Islands. Both system phases share the same Parallel and Home filesystems.

The total available capacity in this call for SuperMUC is **44 (30+14) million** compute core hours.

It is recommended for proposals requesting a **minimum of 15 million** compute hours.

SuperMUC is available for Single-Year Access, Multi-year Access and CoEs.

IMPORTANT REMARK:

Please note that any of the Tier-0 system **may be upgraded** during the Single-Year or Multi-Year allocation period. The awarded projects will be given access to the new machine for the remaining part of the budget with appropriate technical support.

3. Eligibility criteria

Scientists and researchers from academia and industry can apply for access to PRACE resources.

Only proposals with a civilian purpose will be eligible to participate in PRACE calls for proposals.

Only proposals written in English will be eligible.

PRACE HPC centres may have further restrictions on who is eligible to access their own systems. It is the responsibility of the applicant to ensure that they are eligible to access the system(s) they have applied for. In case of doubts, the applicant is advised to contact the HPC centre(s) for clarifications prior to applying (see contacts at www.prace-ri.eu/Resources).

3.1 Eligibility criteria for Project Access (Single-Year and Multi-Year)

3.1.1- Eligibility criteria for academia and public research organisations

Researchers from academia and public research organisations are eligible to apply as long as:

- a) The project leader has an employment contract as a researcher in the organisation
- b) The employment contract of the project leader must be valid for at least 3 months after the end of the allocation period

3.1.2- Eligibility criteria for commercial companies

Commercial companies may apply on their own or in collaboration with academia/public research organisation (as principal investigators or collaborators). Commercial companies are eligible to apply if:

- a) The company has its head office or substantial R&D activity in Europe
- b) The employment contract of the project leader must be valid for at least 3 months after the end of the allocation period
- c) Access is devoted solely for open R&D research purposes
- d) Commercial companies applying on their own will be limited to a maximum of 5% of the total computing resources of a single PRACE system, subject to the approval of the constraints imposed by state-aid regulations

4. Terms of access

The Principal Investigator (or Project leader) shall direct the project and is expected to be an essential participant in its implementation. The PI will have the overall responsibility for the management of the project and interactions with PRACE.

The PI commits to:

a) **Provide** to PRACE within the period established in the Guide for Applicants a **final report**, using the proper PRACE template, with the results obtained through the access to the PRACE Research Infrastructure, as well as a qualitative feedback on the use of the resources.

b) **Acknowledge** the role of the HPC Centre and PRACE and of the relevant partners involved in the pilot use case for joint data storage in all publications which include the results above mentioned. Users shall use the following (or equivalent) wording in such acknowledgement in all such papers and other publications:

“We acknowledge PRACE for awarding us access to [resource-name at site]”¹

Respecting the words in bold above is very important since PRACE will use this word pattern when searching for bibliographic references in scientific articles

c) **Allow** PRACE to publish the mentioned report as of one year from the termination of the allocation period.

d) **Collaborate** with PRACE, upon its request, in the preparation of dissemination material.

Access to PRACE resources is for **open R&D research purposes and is free of charge** provided that the eligibility criteria and terms of access described herein and in the On-line Application Form are fulfilled/respected. If this differs from the terms of access that the relevant Centre may have in place, it is the terms of access of the relevant Centre that will prevail.

Users will hold harmless PRACE and the relevant Centre, including their Directors and staff, from and against any claim and expense arising out of the use of the resources.

From the start to the end of the access period, the applicant should direct questions and requests for support to the user support of the HPC Centre(s) where resources have been allocated.

Applicants must inform promptly the peer review team (peer-review@prace-ri.eu) and the centre where the resources are allocated of any changes to a successful proposal, namely a decrease in the amount of resources needed or on the distribution of the usage of the resources within the agreed time plan with the centre.

Requests for the extension of the allocation period need to be fully justified, and sent to the HPC centre where the resources are allocated. They will be analysed 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

¹ Use as many instants of the pattern [resource-name at site] as the number of systems awarded via PRACE. The word ‘site’ can be replaced by ‘BSC, Spain’, ‘CINECA, Italy’, as applicable.

which would prevent the user from accessing the awarded HPC resources. The awarded resources (total computer time) cannot be increased.

5. Process details and deadlines

5.1- How to Apply

All proposals must be submitted via the PRACE website at: <https://prace-peer-review.cines.fr/>

All proposals must be fully completed and submitted by the closing date. The submission website will not accept applications that are submitted after this time. In the case of technical difficulties, the decision of PRACE as to whether an application can be accepted is final.

Applicants are advised to make sure that they submit proposals as early as possible before the given deadline in order to ensure that all mandatory fields are completed and submission is accepted.

Further details on the standard application procedure can be found on the [PRACE website](http://www.prace-ri.eu/application-guide/) (“How to Apply” <http://www.prace-ri.eu/application-guide/>).

5.1.1- Applications for Single-year and Multi-Year Project Access

All proposals for Single-year and Multi-Year Project Access consist of 2 documents: an on-line form and a “Detailed Project Document”, both available via the above mentioned website.

All mandatory fields of the on-line application form must be completed before it can be submitted. After the form has been saved, applicants can continue to access it and update it before they finally submit it. Once an application has been submitted no more changes can be made, unless the applicant un-submits the proposal, performs all necessary changes, saves the changes, and re-submits the proposal. Each time the applicant submits or un-submits the proposal, he/she will receive an e-mail with the status of the proposal (un-submitted or submitted). **Please note that only submitted proposals will be put forward for peer-review.**

The template of the compulsory “Detailed Project Document” of the proposal (pdf to be attached to the online application form) must be carefully respected (Headings, Length of Paragraphs, Tables and Figures). **Proposals that do not follow the template or that are incomplete cannot be considered for peer-review (considered Administratively Rejected).** The PRACE support team is available to answer questions by email while the Call is open (peer-review@prace-ri.eu).

For proposals requesting access as a follow-up to a previous project access, it is mandatory to present a final or progress report of the previous access at the time of the closure of the current Call. This report should be sent to the PRACE peer-review team at peer-review@prace-ri.eu by the Call deadline date. The report will be analysed by the scientific reviewers and Access Committee members to evaluate the status of the on-going access and whether the need for the follow-up project is acceptable or not.

The template document for this report is available on the [PRACE website](http://www.prace-ri.eu) (“Information for PRACE Awardees”), or on request to peer-review@prace-ri.eu, and must be carefully respected.

5.2- Peer Review assessment procedure

The assessment procedure (Peer-Review Process) abides to the PRACE Peer-Review principles stated on the [PRACE website](#) (“Peer-Review”). The Peer-Review Process encompass 4 phases.

From **21 to 25 November 2016**, the PRACE Peer-Review Team will perform an **Administrative check** (phase I). Proposals not complying with PRACE eligibility criteria will be rejected at this stage and will not continue to the next phase.

From **25 November to 9 December 2016**, proposals administratively accepted will be technically peer-reviewed by recognised Technical experts in PRACE systems and software (phase II). During this phase, applicants will be contacted by technical experts in case of questions or concerns raised during the review.

From **25 November 2016 to 20 January 2017**, proposals administratively accepted will be scientifically peer-reviewed by recognised independent Scientific experts (phase III). Individual reports will be made available to applicants.

From **23 January (10:00 CET) to 30 January (10:00 CET) 2017**, during the right to reply phase, applicants are strongly recommended to use the opportunity to comment on these assessments.

The reviewers’ reports and the applicants’ responses will be analysed by the Prioritisation Panel and Allocation Board (Phase IV) who will produce the final ranking list. In case of conflicting reviews and responses, the Prioritization Panel will analyse the proposal.

Proposals will be awarded by moving down the ranking list in order until resources run out. If necessary, the Prioritisation Panel and Allocation Board may agree on a scientific quality cut-off threshold. Proposals ranked under this threshold will not be awarded even if there are resources available on the systems.

By **end of March (last week) 2017**, all applicants can expect to be notified of the outcome although efforts will be made to notify successful applicants as soon as possible.

5.2.1- Criteria for assessment

Only fully completed proposals will be subject to the hereinafter peer-review evaluation process.

5.2.1.1- Technical review

It is essential that proposals submitted are at a high level of technical maturity and demonstrate the need for Tier-0 resources. Further details on the minimal requirements for using each Tier-0 system are available on the [PRACE website](#) (“**Call Announcement**” page – document titled ‘**Technical Guidelines for Applicants to PRACE 14th Call (Tier-0)**’).

The computer codes used during the project should have been previously tested and a high level of scalability and development must be demonstrated. These computer codes must be ready to run on Tier-0 systems.

During the technical review, technical experts may contact the applicants in case of questions or concerns raised during the review.

5.2.1.2- Scientific review

Successful proposals must demonstrate scientific excellence and focus on topics of major relevance for European research explaining the novelty, transformative aspects and expected scientific impact, and must include a dissemination plan. The results of the project should lead to committed publication in one or more high-quality journals and conferences.

The identification of possible practical and timely applications resulting from the project is desirable and must be made clear in the application.

The scientific review assessment form is available to applicants and can be downloaded from the [PRACE website](http://www.prace-ri.eu) (see documents at bottom of the page with title "Information for reviewers" <http://www.prace-ri.eu/information-for-reviewers/>).

Terminology

Core hour: Elapsed time (wall clock time) in which a core is allocated to the user.

Node hour: Elapsed time (wall clock time) in which a node is allocated to the user.

Contacts

For any queries related to applications, please contact: peer-review@prace-ri.eu