National Competence Center Italy
Call for proposals on industrial applications
HPC/HPDA/AI

Terms of Reference

1. Goal and scope of NCC Italy Call

The **Italian National Competence Center (NCC)** within the EuroCC project is aimed at supporting the activities on high performance computing (HPC), High Performance Data Analytics (HPDA) and Artificial Intelligence (AI), for the benefit of companies with particular regard to Small and Medium Enterprises (SMEs).

More in detail the competence centre is funnelling the know-how and skills of research in training and knowledge-transfer actions that are focused on specific and concrete needs of the business community, in collaboration with the associations representing the different business categories.

EuroCC comprises 33 National Competence Centers coordinated by the European project Castiel. The ultimate goal of Castiel project is to gain an overall picture at the European level, highlighting the specific competences on HPC, HPDA, and on AI being available for the economy. This will enable the activation of training and twinning programs among the NCCs, so as to share experiences, achievements, success stories and international cooperations to serve the companies and the regions.

The Italian NCC is powered by CINECA with the collaboration of Associazione Big Data, Centro di Competenza Big Data Bi-Rex, Dompè Farmaceutici, [Eni SpA](Eni SpA), and Leonardo.

The NCC Italy Calls for proposals will have two runs (Q1 2021 and Q3 2021) which will stay open for one month. Once the call is closed, the applications are reviewed by a NCC Italy assigned panel, and successful applicants informed and assigned a NCC Italy expert to work with them. The timescale for this is to inform all applicants of their success or otherwise *within one month* of the call's closure.

2. Award of resources

Awarded proposals will have the possibility to use in-kind world-class High-Performance Computing NCC Italy infrastructures.

Successful applicants to NCC Italy call will be assigned an NCC Italy expert to work with them on their project. The NCC Italy expert will have maximum 12 months of effort to expend on the collaboration. In addition, **the company will be able to access to a budget of maximum 200 K core hours on CPU-based systems, and a maximum of 50K node hours on Hybrid systems** (depending on the required computing

systems) on a CINECA infrastructure: in turn, the company will provide effort from their own staff to work with the NCC Italy expert, publicise their work with NCC Italy, produce a public report at the end of the project for publication on the NCC Italy website, and provide feedback on any Return on Investment in the medium term following the project's conclusion.

In addition, there are limitations regarding the availability of the support from NCC Italy experts, in terms of staff hours, and the type of expertise required. The expertise is provided by NCC Italy, and may not be available for certain fields of expertise. If the requested support is not available from NCC Italy experts, the application will be rejected.

3. How to Apply

To apply to the NCC Italy Call, please write an email to registration-nccitaly@cineca.it with your full name and email. You will receive at latest the next working day the indication to access the online Application Form. All proposals must be submitted by completing the Application Form.

Information on how to access the forms for any current call will be available in the restricted access area.

All fields must be filled in before the application form can be submitted. The form includes comments and advice on how to fill it in.

In case some companies may not be in a position to provide all of the information requested (e.g. specific hardware details, quantity of machine time etc.) please contact the technical support helpdesk @CINECA at the following email: technical-support-nccitaly@cineca.it

4. Eligibility

NCC Italy call for proposals is open to italian companies with registered head offices in Italy.

5. Evaluation of applications and assessment criteria

The NCC Italy submission and evaluation process is composed of the following major steps.

- The Call is launched. There is an Application Form available online to be filled in (by the company/SME, although assistance from CINECA technical helpdesk is available) – the form contains suggestions and information on how to complete it.
- The Call closes: The applications are reviewed by the Italy NCC review panel. The review panel is composed by three independent reviewers from Bi-Rex Competence Center, ISCRA and CINECA.
- Recommendations: The review panel makes their recommendations on which projects to approve and results will be communicated to the applicants, after a ratification from the Eurcc-Italy Project Board.
- Machine time: with the support from CINECA, the company/SME applies for machine time on an appropriate system by registering on the CINECA User Database
- Coordination: The company/SME with the technical support of CINECA does the project work and at the end the NCC Italy coordination team collects the final Report.

The proposals will be evaluated by a committee ensuring the impact of the selected projects on the company's innovation, business sustainability and granting the technical feasibility. The panel judges the applications using the following criteria:

- Business Sustainability & Project implementation:
    - o The expertise and resources provided through the NCC Italy programme are expected to produce a significant Return on Investment for the company. In the mid-term, the company should be able to build on the results to, for instance, increase its market share, renew its investment, offer new products or services, or recruit dedicated staff. The solution implemented should be part of a business plan to further engage in HPC in the long term. The proposals will be evaluated according to the workplan proposed and the commitment of the company to co-invest with NCC Italy in achieving the project goals.
- Technical Feasibility:
    - o The proposals are expected to be realistically achievable in the timescales described and with the resources made available.
- Innovation:
    - o The innovative technical/scientific aspects of the proposal and the social and economic impact on society as a whole

The applications will be reviewed and ranked according to these criteria, then the final recommendations communicated to applicants.

The membership of the NCC Italy review panel may vary with each call mainly due to availability.

The applications must supply a clear motivation for why assistance from NCC Italy will enhance the business of the company. A work plan for how the project will progress and where the human effort will be spent must be provided. Where possible, technical information should be provided with regards the work to be done, such as: any software licensing requirements (licenses that will be brought by the companies), preference of target machine architecture, resource requirements, current code information (language, libraries etc), current scalability issues, suggested parallelisation strategy, and so on

6. Terms of access

Unless otherwise indicated, the Principal Investigator (PI) will be considered to be the person named as the "Contact Name" from the SME/Company on the application form. They will co-lead the project with the NCC Italy expert. The PI and the NCC Italy expert will share responsibility for the delivery of the project goals.

When accepting the NCC Italy award, the companies commit to:

a) Providing effort from their organisation towards the collaborative project with the NCC Italy expert.
b) Provide a final report in the form of a public report to NCC Italy, detailing the results obtained through participation in NCC Italy. Given the collaborative nature of the call, it would be usually expected that this report will be co-authored by representatives of both the company and the NCC Italy partner. This report is due at the conclusion of the technical work, and will be peer-reviewed by NCC Italy representatives ready for publication on the NCC Italy website. In the case where particular results may be commercially sensitive to the company's business, it is still expected that a public

report could be published with a higher-level discussion of the techniques and approach used, omitting the details of particular sensitivity.

c) Provide feedback on the process during the work. This feedback will contribute to the ongoing evaluation of the projects and its processes, and is typically gathered annually as part of the deliverables. A template will be provided for this feedback, and is typically of the order of two pages long.

d) Provide follow-up feedback on the Return on Investment that participation in the NCC Italy programme has affected. This will be gathered approximately 6-12 months following the conclusion of the technical work, and a template will be provided with suggestions for the key performance indicators (KPIs) to be considered. As for (b), this will contribute to the ongoing evaluation of the project and will be included in deliverables.

e) Acknowledge the role of NCC Italy and EUROCC in all publications which include results arising from the work. Users shall use the following wording in such acknowledgement in all papers and other publications:

"We acknowledge EUROCC project for awarding us access to expertise and resources as part of the European High-Performance Computing Joint Undertaking (JU) under grant agreement No 951732"

f) Publicise the fact that the company is working with EUROCC. This can be through trade publications, company websites, press releases, twitter etc.

g) Collaborate with NCC Italy, upon its request, in the preparation of any additional dissemination material.

Access will be free of charge but conditional on the fulfilment of the eligibility criteria and terms of access described in this document and in the Application Form. Users will not hold NCC Italy and the relevant Members, including their Directors and staff, liable to any claim or expense arising out of the use of the awarded resources.

7. Privacy

By submitting the proposals you are accepting the [Cineca privacy policies](#).

Annex 1 - CINECA supercomputing facilities Access Policy

Awarded applicants will be requested to sign and accept the following CINECA supercomputing facilities Access Policy.

Introduction:
This Access Policy (AP) applies to all users of the CINECA supercomputing facilities.
CINECA may make any reasonable change to this AP at any time. If the user does not accept these changes, it may cease to use the CINECA Supercomputing facilities at any time.
User means the individual who has been authorised to access and use the CINECA HPC Resources. For the purposes of this AP, the following terms will have the defined meanings:

- CINECA System means the high performance computing facilities installed in CINECA;
- Resources means the high performance computing service made available by CINECA;
- Username means the identification name assigned to each individual User who has been authorised to access and use the Resources;
- Account means any right to have access to Resources as previously defined. The conditions under which an Account is activated may refer, but are not limited to, formal contracts, awards, tests and development, training and education;
- Period of Availability means the time period allocated by CINECA to the User for accessing and using the CINECA Resources;
- Malicious Software means computer virus, Trojan, worm, logic bomb or other material which is malicious or technologically harmful;
- Intellectual Property Rights (IPR) means:
    - Patents, inventions, designs, domain names, trade marks and related goodwill and trade names (whether registered or unregistered) and all rights to apply for registration of the same;
    - Copyright and related rights, database rights, know-how and confidential information;
    - All other intellectual property rights and similar or equivalent rights anywhere in the world which currently exist or are recognised in the future; and
    - All applications, extensions and renewals in relation to any such rights.
- GDPR means the General Data Protection Regulation that becomes enforceable on 25 May 2018 and aims at the protection of personal data for all individuals within the EU

General Use:

- The User agrees to the enrolment, processing and transmission of the personal data asked for by CINECA;
- The User will inform CINECA of any changes to his/her personal enrolment information;
- The User will use the Resources only in conjunction with the purposes for which the Account is activated, the overriding objectives of CINECA and this AP;
- The User will inform CINECA in case his activity requires the loading and processing of data that may fall under the GDPR (personal data), in order to identify the appropriate security level;
- The Username is strictly personal and may not be transferred to any other third party. The rights to use the CINECA Resources will terminate when the Account is exhausted or expired;
- The User recognises that the access to CINECA Resources by citizens of certain countries may be restricted by policies laid down by CINECA;
- The User will respect all IPR belonging to CINECA, including any copyright and licence;
- The User agrees to not remove from the CINECA System any data without the explicit or implied permission of its owner;

- Use of the CINECA Resources is at the risk of the User. CINECA does not make any guarantee as to their availability or their suitability for purpose;
- CINECA excludes all liability for representations, statements, conditions or warranties to that or any other effect except to the extent that such liability may not be lawfully excluded;
- The User will exercise all reasonable care when accessing the CINECA Resources.

Unacceptable Use:

- The User will not use the CINECA Resources for any unacceptable purposes. Unacceptable purposes include but are not limited to:
  Any activity which is illegal under local, national or international law;
- Any attempt to breach or circumvent any administrative or security controls;
- Any creation, storage, use or transmission of data which is in breach of any copyright or licence;
- Any activity which causes material or moral damage to CINECA, or which causes loss of operational efficiency, or loss or corruption of the CINECA System;
- Any activity which interferes with the use of the CINECA Resources by other users;
- Any activity which compromises the privacy of other users.

Security:

- CINECA will provide the User with a username and password. Upon receipt of the username and password, the User will change the password immediately. It is the responsibility of the User to protect the details of his/her username and password; The User will not divulge its password to any third parties, unless expressly authorised to do so by CINECA. The User will not use any other user's username to access the CINECA Resources;
  Passwords should be changed as often as needed in order to guarantee a reasonable security to CINECA's system access;
- The User will take all steps necessary to protect the security of personal computers, laptops and workstations against unauthorised access. Recommended security measures include the use of password-protected screensavers and locking and/or shutting down terminals when left unattended or not in use;
- The User will not knowingly introduce onto the CINECA System any Malicious Software and will not misuse the Internet in any way;
- The User will use the latest versions of anti-virus software available from an industry accepted anti-virus software vendor on all of its access systems to check for and prevent the introduction of Malicious Software onto the CINECA System;
- The User will act immediately to remove any Malicious Software from CINECA System. The User will not interfere with any anti-virus application software run by CINECA;
- Software that is required for the access of the CINECA Resources should be installed on the personal workstations in a protected partition or in a secure mode. That software will be maintained by the User and regularly updated for ensuring security updates;
- The User will not use any computer applications that jeopardise the functioning of the CINECA System. CINECA will notify the User, who will take all steps necessary to detect the cause and prevent re-occurrence. CINECA has the right to suspend the User's access to the CINECA System if necessary and to prohibit any computer application that, in its reasonable opinion, poses a security threat;

- CINECA will endeavour to protect the confidentiality of information stored on the CINECA System. Any information stored on the CINECA System will be used by CINECA, or any third party authorised by CINECA, for administrative, operational, monitoring and security purposes only;
- The User agrees to comply with any special conditions that may apply to specific software installed on the CINECA System;
- The User will report to CINECA if he/she becomes aware of any malfunction of the CINECA System or any problem in accessing the CINECA Resources.
- The User will report immediately to CINECA if he/she becomes aware of any unauthorised use of its username,

or if he/she knows or suspects that there has been a breach of security or misuse of the CINECA Resources;
- The User must take suitable precautions to take care of his/her data once the Service comes to an end. Data are property of the User and are connected to the username;
- The username will survive one year more with respect the end of all the related Accounts. In this one year period the User will be allowed to manage and download the data. One month before the expiration of the username, the User will be noticed of the impending event. After the expiration of the username, all data stored in the User's personal workspace will be deleted.

Liabilities and Sanctions:

The User will be liable for any damages resulting from the infringement of this AP or any other policies or conditions imposed by CINECA.

Any infringement or potential infringement will be notified by CINECA to the User in writing.

If the infringement persists and/or further infringements are detected and/or where it is justified by the seriousness of the infringement, CINECA may withdraw access rights to the CINECA System and/or initiate disciplinary proceedings and/or legal proceedings against the User.

User Responsibilities:

Each person making use of CINECA computing resources assumes certain responsibilities.