European High Performance Computing Joint Undertaking

REF: EUROHPC-2024-CEI-IND-01

CALL FOR EXPRESSION OF INTEREST

for the selection of consortia of private partners and the Hosting Entities for the procurement of Industrial High Performance Computers

Contents

1. INTRODUCTION – CONTEXT AND BACKGROUND

The European High Performance Computing Joint Undertaking (hereinafter "EuroHPC JU") was established by Council Regulation (EU) 2021/1173 of 13 July 2021 (hereinafter "Regulation") and entered into force on 8 August 2021[1].

According to Article 3 of the Regulation, the mission of the EuroHPC JU is to develop, deploy, extend and maintain in the Union a federated, secure hyperconnected supercomputing, quantum computing, service and data infrastructure ecosystem; to support the development and uptake of demand-oriented and user-driven innovative and competitive supercomputing systems based on a supply chain that will ensure components, technologies and knowledge limiting the risk of disruptions and the development of a wide range of applications optimised for these systems; and, to widen the use of that supercomputing infrastructure to a large number of public and private users, and support the twin transition and the development of key skills for European science and industry.

In line with Article 13 of the Regulation, the EuroHPC JU shall acquire, together with a consortium of private partners, the industrial-grade supercomputers. The industrial-grade supercomputer is defined as *at least a mid-range supercomputer specifically designed with security, confidentiality and data integrity requirements for industrial users that are more demanding than for a scientific use*. In accordance with Article 13(2) of the Regulation, the Union's contribution from Digital Europe Programme should cover up to 35 % of the acquisition costs. The remaining total cost of ownership of such supercomputers or the partitions of the EuroHPC supercomputers, shall be covered by the consortium of private partners. The EuroHPC JU shall own or co-own industrial-grade supercomputers with a consortium of private partners.

One of the targets of the EuroHPC JU is to develop, deploy, extend and maintain in the Union an integrated, demand-oriented and user-driven hyper-connected world-class supercomputing and data infrastructure as well as to further develop and support a highly competitive and innovative supercomputing and data ecosystem broadly distributed in Europe contributing to the scientific and digital leadership of the Union, capable of autonomously producing computing technologies and architectures and their integration on leading computing systems, and advanced applications optimised for these systems.

Pursuant to Article 9 of the Regulation, the EuroHPC JU shall entrust to a hosting entity the operation of each individual industrial-grade EuroHPC supercomputer it owns or co-owns in accordance with Article 10 of the Regulation. The hosting entity shall enter into an agreement with a consortium of private partners for preparing the acquisition and for operating such industrial-grade supercomputers or partitions of EuroHPC supercomputers.

The hosting entity and its associated consortium of private partners shall be selected by the Governing Board of the EuroHPC JU ('Governing Board') following a Call for Expression of Interest evaluated by independent experts.

The present Call for Expressions of Interest is launched for the selection of the hosting entities and its associated consortium of private partners of an industrial-grade supercomputer the EuroHPC JU will acquire as mandated, on the basis and in accordance with Council Regulation (EU) 2021/1173, taking

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[1] OJ L 256, 19.07.2021, p. 3-51.

into account the EU Financial Regulation[2] where relevant on the basis of the EuroHPC JU's Financial Rules[3].

2. OBJECTIVES

The <u>overall objective</u> of this call is to select hosting entities for industrial-grade supercomputers which will be acquired by the EuroHPC JU together with a consortium of private partners.

The <u>specific objective</u> of this call is the following:

> <u>Selection of hosting entities and their associated consortia of private partners and conclusion of hosting agreements</u>: The EuroHPC JU will select the hosting entities for the industrial-grade supercomputers and the associated consortia of private partners. The EuroHPC will conclude with each of the Hosting Entities a hosting agreement, which will permit to establish a stable and structured partnership between the EuroHPC JU and the Hosting Entities for the acquisition and operation of such supercomputers or partitions of the EuroHPC supercomputers.

> By submitting the application, the applicants provide their prior acceptance with the terms and conditions set in the model hosting agreement.[4]

The EuroHPC JU will evaluate, with the help of external experts, the received applications to the call for expression of interest and will set up a ranking list of potential hosting entities (and their hosting consortia of private partners) for the industrial-grade supercomputers. From this ranking list, the EuroHPC JU, by decision of its Governing Board, will make a selection of hosting entities and consortia of private partners. Inclusion in the list entails no obligation on the part of the EuroHPC JU for the conclusion of any contract.

Following this selection:

- A **hosting agreement** between the EuroHPC JU and each of the hosting entities will be signed, laying down the terms and conditions for hosting and operating the supercomputer on behalf of the EuroHPC JU, including a service level agreement (Regulation Article 10).
  Based on the agreement with the consortium of private partners for preparing the acquisition and for operating such industrial-grade supercomputers or partitions of EuroHPC supercomputers, the hosting entity and the EuroHPC JU will be jointly responsible for implementing the acquisition process including for example, the verification of the technical specifications to be met by the suppliers. The hosting agreement is part of the outcome of the Call for Expression of Interest.
- In close cooperation with and based on the agreement with the consortium of private partners, the procedures for the selection of the supplier of an industrial-grade EuroHPC supercomputer (procurement procedure) shall be launched, together with the EuroHPC JU. These procedures

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[2] Regulation (EU, Euratom) 2018/1046 of the European Parliament and of the Council of 18 July 2018 on the financial rules applicable to the general budget of the Union, amending Regulations (EU) No 1296/2013, (EU) No 1301/2013, (EU) No 1303/2013, (EU) No 1304/2013, (EU) No 1309/2013, (EU) No 1316/2013, (EU) No 223/2014, (EU) No 283/2014, and Decision No 541/2014/EU and repealing Regulation (EU, Euratom) No 966/2012, *OJ L 193, 30.7.2018, p. 1–222, ("FR").*
(https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:32018R1046).
[3] Decision of the Governing Board of the EuroHPC JU No 3/2020 Approving the Financial Rules of the EuroHPC Joint Undertaking readopted by Decision of the Governing Board of the EuroHPC JU No 17/2021 approving the re-adoption of Governing Board Decisions adopted under the framework of Regulation (EU) 2018/1488 and its updated Rules of Procedure in the view of Regulation (EU) 2021/1173.
[4] The model hosting agreement is annexed, see Annex 2 of this call.

will, amongst other, take into account the user requirements and general system specifications provided by the selected hosting entity in line with Article 13 of the Regulation.

3. BUDGET AVAILABLE

The Union financial contribution to the EuroHPC JU shall cover up to 35% of the acquisition costs of the industrial-grade supercomputers. The remaining total cost of ownership of the supercomputers shall be covered by the consortium of private partners in the hosting consortium[5].

> The Union's total financial contribution to the EuroHPC JU for the objective of this call is estimated at a maximum of EUR **12.2 million** depending on budget availability.

This action is an EU Synergy call. Grants and procurements can be linked with another grant funded from any other EU funding programme. The grants under both calls will be managed as linked actions.

4. CONTENT OF THE EXPRESSIONS OF INTEREST

The expressions of interests must be submitted using the application form included as a separate Annex 1 to this call (EuroHPC Application Form). Appendix 1 of this document provides information on how to fill the Application Form.

5. ADMISSIBILITY REQUIREMENTS

In order to be admissible:

a) Applications must be sent no later than **Tuesday 30 April 2024 at 17:00 Luxembourg time**.
b) Applications must be submitted in writing (see section 11 "Procedure for the submission"), using the application form in the Annex 1 (EuroHPC Application Form) and available at Selection of Hosting Entities (europa.eu).
c) Applications must be submitted in the English language in three copies.

Failure to comply with those admissibility requirements will lead to the rejection of the application.

6. ELIGIBILITY CRITERIA

The call is open to entities or consortia of entities fulfilling cumulatively the following conditions as defined in Article 9 of the Regulation:

a) The applicant shall include the facilities to host and operate an industrial-grade supercomputer in a Participating State to the EuroHPC JU that is a Member State.

b) The coordinating applicant has to be registered as a legal entity in one of the Participating States that is a Member State.

c) The applicant(s) must have a legal personality on the date of the deadline for submission of applications and must be able to demonstrate their existence as a legal person. In case the application is submitted by several applicants working together (consortium), this criterion (c) applies to all entities.

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[5] 'Hosting consortium' means a group of Participating States or a consortium of private partners that have agreed to contribute to the acquisition and operation of a EuroHPC supercomputer, including any organisations representing these Participating States.

d) Applications should include the provision of appropriate supporting documentation proving the commitment of the consortium of private partners to cover the share of the total cost of ownership of the EuroHPC industrial-grade supercomputer that is not covered by the Union contribution as set out in Article 5 of the Regulation or any other Union contribution as set out in Article 6 of the Regulation;

The hosting entity shall take the lead in the consortium with its private partners and act as coordinator of the consortium. The coordinator will act as an intermediary for all communications between the EuroHPC JU and the private partners. However, partners are jointly responsible for implementing the action resulting from the awarded hosting agreement. To implement the action properly, they must make appropriate internal arrangements.

The hosting entity shall assume full liability towards the EuroHPC JU for the performance of the agreement as a whole, including financial and operational liability.

The hosting entity shall enter into an agreement with a consortium of private partners for preparing an acquisition and for operating industrial-grade supercomputers.

In order to assess the applicants' eligibility, the following supporting documents are requested:

- The legal entity identification form (http://ec.europa.eu/budget/contracts_grants/info_contracts/legal_entities/legal_entities_en.cfm) duly completed and signed by the person authorised to enter into legally binding commitments on behalf of the applicant organisation(s) to be submitted in original.

- In addition to the supporting documents referring to their legal status, the consortium of private partners will submit a signed declaration based on the model Consortium Agreement/Power of Attorney, appointing the hosting entity as leader, and giving a mandate to it (included as Annex 1B).

- Each applicant and private partners must fill-in and provide the duly signed Declaration on Honour (included as Annex 1A).

The following entities will be considered as non-eligible:

a) natural persons;
b) entities without legal personality.

7. EXCLUSION CRITERIA

7.1. Exclusion[6]

The Executive Director of the EuroHPC JU shall exclude an applicant from participating in this call for expression of interest where:

(a) the applicant is bankrupt, subject to insolvency or winding-up procedures, its assets are being administered by a liquidator or by a court, it is in an arrangement with creditors, its business activities are suspended, or it is in any analogous situation arising from a similar procedure provided for under EU or national laws or regulations;

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[6] Article 136 FR.

(b) it has been established by a final judgment or a final administrative decision that the applicant is in breach of its obligations relating to the payment of taxes or social security contributions in accordance with the applicable law;

(c) it has been established by a final judgment or a final administrative decision that the applicant is guilty of grave professional misconduct by having violated applicable laws or regulations or ethical standards of the profession to which the applicant belongs, or by having engaged in any wrongful intent or gross negligence, including, in particular, any of the following:

(i) fraudulently or negligently misrepresenting information required for the verification of the absence of grounds for exclusion or the fulfilment of eligibility or selection criteria or in the performance of a contract, a grant agreement or a grant decision;

(ii) entering into agreement with other applicants with the aim of distorting competition;

(iii) violating intellectual property rights;

(iv) attempting to influence the decision-making process of the EuroHPC JU during the award procedure;

(v) attempting to obtain confidential information that may confer upon it undue advantages in the award procedure;

(d) it has been established by a final judgment that the applicant is guilty of any of the following:

(i) fraud, within the meaning of Article 3 of Directive (EU) 2017/1371 of the European Parliament and of the Council and Article 1 of the Convention on the protection of the European Communities' financial interests, drawn up by the Council Act of 26 July 1995;

(ii) corruption, as defined in Article 4(2) of Directive (EU) 2017/1371 or Article 3 of the Convention on the fight against corruption involving officials of the European Communities or officials of Member States of the European Union, drawn up by the Council Act of 26 May 1997, or conduct referred to in Article 2(1) of Council Framework Decision 2003/568/JHA, or corruption as defined in the applicable law;

(iii) conduct related to a criminal organisation, as referred to in Article 2 of Council Framework Decision 2008/841/JHA;

(iv) money laundering or terrorist financing within the meaning of Article 1(3), (4) and (5) of Directive (EU) 2015/849 of the European Parliament and of the Council;

(v) terrorist offences or offences linked to terrorist activities, as defined in Articles 1 and 3 of Council Framework Decision 2002/475/JHA, respectively, or inciting, aiding, abetting or attempting to commit such offences, as referred to in Article 4 of that Decision;

(vi) child labour or other offences concerning trafficking in human beings as referred to in Article 2 of Directive 2011/36/EU of the European Parliament and of the Council;

(e) the applicant has shown significant deficiencies in complying with main obligations in the performance of a contract, a grant agreement or a grant decision financed by the Union's budget, which has led to its early termination or to the application of liquidated damages or other

contractual penalties, or which has been discovered following checks, audits or investigations by an authorising officer, OLAF or the Court of Auditors;

(f) it has been established by a final judgment or final administrative decision that the applicant has committed an irregularity within the meaning of Article 1(2) of Council Regulation (EC, Euratom) No 2988/95;

(g) it has been established by a final judgement or final administrative decision that the applicant has created an entity in a different jurisdiction with the intent to circumvent fiscal, social or any other legal obligations of mandatory application in the jurisdiction of its registered office, central administration or principal place of business;

(h) it has been established by a final judgement or final administrative decision that an entity has been created with the intent referred to in point (g);

(i) for the situations referred to in points (c) to (h) above, the applicant is subject to:

(i) facts established in the context of audits or investigations carried out by European Public Prosecutor's Office after its establishment, the Court of Auditors, the European Anti-Fraud Office or the internal auditor, or any other check, audit or control performed under the responsibility of an authorising officer of an EU institution, of a European office or of an EU agency or body;

(ii) non-final judgments or non-final administrative decisions which may include disciplinary measures taken by the competent supervisory body responsible for the verification of the application of standards of professional ethics;

(iii) facts referred to in decisions of persons or entities being entrusted with EU budget implementation tasks;

(iv) information transmitted by Member States implementing Union funds;

(v) decisions of the Commission relating to the infringement of Union competition law or of a national competent authority relating to the infringement of Union or national competition law; or

(vi) decisions of exclusion by an authorising officer of an EU institution, of a European office or of an EU agency or body.

7.2. Remedial measures[7]

If an applicant declares one of the situations of exclusion listed above, it should indicate the measures it has taken to remedy the exclusion situation, thus demonstrating its reliability. This may include e.g. technical, organisational and personnel measures to prevent further occurrence, compensation of damage or payment of fines. The relevant documentary evidence which illustrates the remedial measures taken must be provided in annex to the declaration. This does not apply for situations referred in point (d) of section 7.1.

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[7] Article 136 (7) FR.

7.3. Rejection from the call

The Executive Director of the EuroHPC JU shall not conclude a hosting agreement with an applicant who:

   a. is in an exclusion situation established in point (d) of section 7.1 and in any of the remaining exclusion situations established in section 7.1 when no remedial measures of section 7.2 are adopted;

   b. has misrepresented the information required as a condition for participating in the procedure or has failed to supply that information.

The same exclusion criteria apply to affiliated entities.

Administrative sanctions (exclusion) may be imposed on applicants, or affiliated entities where applicable, if any of the declarations or information provided as a condition for participating in this procedure prove to be false.

7.4. Supporting documents

Applicants must provide a declaration on their honour certifying that they are not in one of the situations referred to above under 7.3. (please see section 6), by filling in the relevant form attached to the application form accompanying the Call for Expression of Interest (Annex 1a) and available at Selection of Hosting Entities (europa.eu).

8. EVALUATION CRITERIA

Eligible applications will be evaluated according to the following evaluation criteria (based on the list of criteria in Article 9(5), points (a) to (e) of the Regulation):

1. Compliance with the general system specifications defined in the call for expression of interest; (0-20 points)

   o *Quality and pertinence of the application to comply with the general system specifications defined in this call for both the industrial-range supercomputer and the Site.*

   o *Soundness of the system architecture concept, and credibility of the application.*

   o *Extent to which the specific needs of industrial users, for examples protection of data, protection of industrial innovation, intellectual property rights, usability, trust, and other confidentiality and security requirements are taken into account.*

   o *Extent to which the proposed system architecture is appropriate for the software applications it is designed for.*

2. Estimation of total cost of ownership (TCO) of the supercomputer and methodology to calculate it; (0-20 points)

   o *Clarity and effectiveness of the estimated TCO of the application, focusing on acquisition costs.*

3. Experience of the hosting entity in installing and operating similar systems; (0-20 points)

   o *Quality and pertinence of experience of the hosting entity in installing and operating similar systems.*

   o *Extent that provided experience is sufficient for supporting the system described in the general system specifications.*

4. Quality of the hosting facility's physical and IT infrastructure, its security and its connectivity with the rest of the Union; (0-20 points)

  o *Quality and pertinence of the current and proposed hosting facility's physical and IT infrastructure, its security and its connectivity with the rest of the Union.*
  o *Quality and effectiveness of the proposed plan for the readiness of the site to host the industrial-grade Supercomputer.*

5. Quality of service to the users, namely capability to comply with the service level agreement provided among the documents accompanying the selection procedure; (0-20 points)

  o *Quality and pertinence of service to the users, namely capability to comply with the service level agreement provided in the Hosting application.*
  o *Quality of the proposed coordination and/or support measures to ensure requested service level towards EuroHPC JU users.*

Points will be allocated out of a total of 100 on the basis of the above-specified weighting. A minimum threshold of 10 points for each criterion and 60 points for the total will be applied. Applications below these thresholds will be rejected.

For each criterion, if appropriate, applicants must provide detailed information about the role and tasks to be carried out by each consortium member.

9. OVERVIEW OF THE EVALUATION AND SELECTION PROCEDURE

The EuroHPC JU is responsible for the implementation of the evaluation of the received expressions of interest. It shall organise the submission and evaluation procedures and communicates with the applicants.

9.1. Evaluation procedure

The submitted applications will be evaluated in a procedure by a panel of a minimum of three and a maximum of five independent experts, depending on the number of applications received. These experts will be appointed by the EuroHPC JU on the basis of the procedure followed under Digital Europe Programme. For the applications considered admissible according to the section 5, the EuroHPC JU will assess the eligibility and exclusion criteria according to the sections 6 and 7 above. Only eligible applications will be evaluated.

- **Individual evaluations**: In the first step, the independent experts that sit on the panel shall carry out individually the evaluation of expressions of interest on the basis of the evaluation criteria described in section 8 above. They give a score for each criterion, with explanatory comments. These individual reports form the basis of the further evaluation.

- **Consensus meetings**: After carrying out their individual assessment, all the experts that evaluated the application shall convene in a consensus meeting, to agree on a common position, including comments and scores and prepare a consensus report. The consensus meetings shall be moderated by a Programme Officer of the EuroHPC JU who shall seek consensus, impartially, and ensure that all applications are evaluated fairly, in line with the relevant evaluation criteria.

- **Panel review:** The review panel shall be chaired by the Programme Officer of the EuroHPC JU. The panel will review the scores and comments for all applications to check for consistency across the evaluations. If necessary, it will propose a new set of marks or revise comments, and resolve cases where evaluators were unable to agree. The panel will prepare a preliminary evaluation summary report, including questions to be clarified during the hearings.

- **Hearings:** Applicants will be invited to hearings with the experts to clarify the questions of the panel. The applicants will receive the relevant questions two weeks in advance of the hearings. Hearings shall consist of oral presentations (approx. 60 minutes) by the applicants of their application and of their responses to the questions of the evaluation panel. The panel may ask further clarifications on the presentation and original questions. The presentation and responses shall not lead to an alteration of the application submitted but shall aim to ensure the proper understanding of the application. The hearing will last a maximum of 120 minutes. A maximum of five representatives from the applicant can participate in the hearing. Members of the EuroHPC JU Governing Board can participate as observers during the hearings. Hearings will be physically held in principle in Luxembourg (unless otherwise specified).

- **Finalisation of Panel review:** After the hearings, the review panel will reconvene to establish its final ranking list and scores according to the evaluation criteria provided in section 8 above. Only applications above threshold will be ranked by the review panel according to the evaluation criteria total score. If necessary, a priority order for applications with the same score will be determined in the ranked list, according to the following approach:

Applications with the same score: Applications with the same total score will be prioritised according to the scores they have received for the evaluation criterion "*compliance with the general system specifications defined in the call for expression of interest*". When these scores are equal, priority will be based on scores for the evaluation criterion "*experience of the hosting entity in installing and operating similar systems*", then "*total cost of ownership of the supercomputer*" and then "*quality of the hosting's facility's physical and IT infrastructure*". These factors will be documented in the Panel Report.

9.2. Selection

The Executive Director of the EuroHPC JU will review the results of the evaluation panel and will elaborate a final ranking list based on the list proposed by the panel. The Executive Director may suggest to the Governing Board to deviate from the ranking proposed by the panel with a justification, for the consideration of the Governing Board.

This final ranking list shall consist of:

− a main list with the applications to be selected as hosting entities and associated consortia of private partners as proposed by the experts complemented by any suggestion for deviation from this list as proposed by the Executive Director;
− a reserve list, with applications that have passed the evaluation thresholds. Applicants in the reserve list might be offered the possibility to become hosting entities and thus, conclude a hosting agreement, in case for whichever reason a hosting agreement cannot be established with a higher ranked application or additional funds become available.

In addition, the EuroHPC JU will prepare a list with applications that did not pass the evaluation thresholds or were found to be ineligible.

The Executive Director will submit the final ranking list, together with the Evaluation Summary Reports, to the Governing Board of the EuroHPC JU with a proposal for selection of the hosting entities and associated consortia of private partners for their approval.

The Governing Board will make the final selection of the Hosting Entities and associated consortia of private partners, which will be invited to establish a hosting agreement with the EuroHPC JU.

After the decision of the Governing Board, all applicants will be informed in written by the EuroHPC JU of the outcome of the evaluation in the form of an Evaluation Summary Report (ESR). The EuroHPC JU will also inform about the final selection or rejection of applications.

The EuroHPC JU will invite the selected applicants to the next stages for the signature of the hosting agreement, and the preparation of the acquisition of the industrial-grade supercomputer, but the invitation is not a commitment that the EuroHPC JU will launch the acquisition procedures. The hosting agreement shall be approved by the Governing Board before its signature by the respective parties.

9.3. Communication

The information contained in the present call document provides all the information required to submit an application. Please read it carefully before doing so, paying particular attention to the priorities and objectives of the present call.

All enquiries must be made by e-mail only to:

calls@eurohpc-ju.europa.eu.

Questions shall be sent to the above address no later than the **22 April 2024– 16:00 Luxembourg time**, defined as "Deadline to submit questions about the Call" in Section 10.

The EuroHPC JU has no obligation to provide clarifications to questions received after this date.

Replies will be given/published no later than the "Publication of the last answers to questions" defined in the timeline in section 10.

To ensure equal treatment of applicants, the EuroHPC JU will not give a prior opinion on the eligibility of applicants, or affiliated entity(ies), an action or specific activities.

No individual replies to questions will be sent but all questions together with the answers and other important notices will be published (FAQ in EN) at regular intervals on the website under the relevant call: Selection of Hosting Entities (europa.eu).

The EuroHPC JU may, on its own initiative, inform interested parties of any error, inaccuracy, omission or clerical error in the text of the Call for Expression of Interest on the mentioned website. It is therefore advisable to consult this website regularly in order to be informed of any updates and of the questions and answers published.

No modification to the applications is allowed once the deadline for submission has elapsed. If there is a need to clarify certain aspects or to correct clerical mistakes, the EuroHPC JU may contact the applicant for this purpose during the evaluation process. This is generally done by e-mail. It is entirely the responsibility of applicants to ensure that all contact information provided is accurate and functioning.

In case of any change of contact details, please send an email with the application reference and the new contact details to calls@eurohpc-ju.europa.eu.

In the case of hosting consortia, all communication regarding an application will be done with the lead applicant only, unless there are specific reasons to do otherwise, where the consortium coordinator should be in copy.

Applicants will be informed in writing about the results of the selection process. Unsuccessful applicants will be informed of the reasons for rejection. No information regarding the award procedure will be disclosed until the notification letters have been sent to the relevant applicants.

10. TIMETABLE

The steps and indicative times for the procedure from publication to expected start of the mandate for the selected Hosting Entities and associated consortia of private partners are in the table below:

Selection of HE milestones	Date and time or indicative period
Call for Expression of Interest Publication	
Publication of Call for Expressions of Interest	8 February 2024
Submission of applications	
Deadline to submit questions about the Call	22 April 2024 – 16:00 (Luxembourg time)
Publication of the last answers to questions	22 April 2024
Call Deadline	30 April 2024 – 17:00 (Luxembourg time)
Application Opening day (open of envelopes with expressions of interest)	3 May 2024
Evaluation	May 2024
Sending questions for the hearings	3 June 2024
Hearings	18 June 2024
Notification of results to applicants	18 July 2024
Signature of the hosting agreement	October 2024
Signature of hosting agreement	October 2024

11. PROCEDURE FOR THE SUBMISSION OF APPLICATIONS

Applications **must be sent no later than the 30 April 2024 at 17:00 Luxembourg time**.

Application forms are available at [Selection of Hosting Entities (europa.eu)](). Applications must be submitted in a correct form, duly completed and dated. They must be submitted in 3 (three) copies (one original clearly identified as such, plus two copies, and an electronic copy on USB stick) and signed by the person authorised to enter into legally binding commitments on behalf of the applicant organisation. The electronic version must contain only the pdf versions of the application presented in paper. Other electronic files will not be considered.

Applications must be submitted in a sealed envelope itself enclosed within a second sealed envelope, addressed as indicated below. The inner envelope must bear, in addition to the address indicated below, the words, "CALL FOR EXPRESSION OF INTEREST - EUROHPC-2024-CEI-IND-01– Not to be opened by the mail service." If self-adhesive envelopes are used, they must be sealed with adhesive tape and the sender must sign across that tape.

Where applicable, all additional information considered necessary by the applicant can be included on separate sheets.

Applications must be sent to the following address:

European High Performance Computing Joint Undertaking
Drosbach Building (DRB) - Wing E – 1st floor
12E rue Guillaume Kroll
L-2920 Luxembourg

- − by post, date of postmark as proof of timely submission;
- − in person, date of receipt, to the address above.
- − by courier service, date of receipt by the courier service as proof.

Applications sent by fax or e-mail will not be accepted.

Contact point for any questions is[8] calls@eurohpc-ju.europa.eu.

All applications will be treated confidentially, as well as any submitted related information, data, and documents. The EuroHPC JU will ensure that the process of handling and evaluating applications is carried out in a confidential manner.

External experts are also bound by an obligation of confidentiality.

Applicants should avoid taking any actions that could jeopardise confidentiality. They must not attempt to discuss their application with persons they believe may act as expert evaluator for the EuroHPC JU.

Your application should not contain any information that is 'EU classified' under the rules on security of information in the Commission security rules for protecting EU classified information (see also Classification of Information in DEP projects).

The EuroHPC JU will process personal data in accordance with Regulation (EU) 2018/1725 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data, and repealing Regulation (EC) No 45/2001 and Decision No 1247/2002/EC[9].

Once the coordinator (or sole applicant) has submitted an expression of interest, an acknowledgement of receipt will be sent by the JU. No other interaction will take place with the EuroHPC JU until the application has been evaluated, unless:

- − The EuroHPC JU needs to contact you (usually through the coordinator) to clarify matters such as eligibility or to request additional information.

The list of Annexes included as part of this call is:

- − Annex 1: Application form (please fill in the application form, including its annexes, and provide the relevant supporting documents – all listed below) which includes the checklist for applicants at the end of the application form and the following annexes:

  - o Annex 1A Declaration on honour
  - o Annex 1B Mandate letters (if applicable)

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[8] Questions on submission must be sent before the deadline indicated in section 10.
[9] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32018R1725

o Other supporting documents to be provided where applicable: see checklist for applicants

- Annex 2: Model Hosting Agreement

- Annex 3: Commitment Letter from the consortium of private partners to cover the share of the total cost of ownership of the EuroHPC supercomputer that is not covered by the Union contribution.

Regarding the compilation of the application file, it is recommended to:

- follow the order of documents as listed in the checklist (and attach a ticked checklist as below to the application);
- print the documents double-sided;
- use 2-hole folders (do not bind or glue; stapling is acceptable).

12. APPENDIX 1: CONTENT OF THE APPLICATION

12.1. Structure of the Application

Applicants must use the application form template for their applications (designed to highlight important aspects and facilitate the assessment against the evaluation criteria).

The application form is structured in two main sections. In the first section, "Information on the applicants", the application must provide administrative details about the applicants and the consortium, including contact details and legal representatives.

The second section "Information on the Action" is divided in five subsections. In the first subsection, applicants must describe how the following general system specifications will be met for the industrial--grade supercomputer and the site. In the second subsection "Total Cost of Ownership", the applicant should include an estimation of the total cost of the acquisition of the industrial-grade supercomputer that the applicant has in mind to host and that has been described in the previous section "general system specifications". In subsection 3, applicants must provide information on their experience in installing and operating similar systems. In subsection 4, Applicants must provide information on the hosting physical and IT infrastructure, including security and connectivity that the site can provide for the industrial-grade supercomputer. In the last subsection, "Quality of service to the users, namely capability to comply with the service level agreement", the applicant should specify the benchmarks or deliverables which the applicant intends to employ to achieve the expected results and targets and how they will be used.

The application form includes a guide on how to fill it for all sections.

Character and page limits:
- page limit: 90 pages
- minimum font size — Arial 8 points
- page size: A4
- margins (top, bottom, left and right): at least 15 mm (not including headers & footers).
- pagination instructions: each document from the application must be individually numbered in the bottom right corner.

As part of the application, applicants must provide a formal statement indicating whether the hosting consortium would be ready or not to include additional partners if selected. Such statement should also include the indicative amounts of the contribution of the additional partners.

12.2. Application domains and General system specifications

Applicants must describe the target applications that the system will accelerate. The proposal should describe at least **5 target application codes**, analysing the current state of the art in terms of e.g. performance, scalability and resolution. The codes could cover a single or multiple industry application domains.

The applicants should elaborate on the importance of the specific codes for the industry and the positive impact expected by the development of the proposed system.

The proposal should provide detailed architectural walkthrough of the system, analysing the rationale behind the system design, emphasising on the possibly novel aspects the system is introducing in terms of technologies aiming to support the proposed application domain(s). The analysis should include the expected aggregated performance of the proposed system, describing the benchmarks to be used for its evaluation, providing justification for their selection.

The proposal should also analyse the security and confidentiality requirements of the application domain and incorporate in the system architecture the technology solutions, coupled with the necessary procedures and policies, that together will ensure that these security requirements are met.

The hosting site should comply with at least the following requirements:

- Power capacity and power quality appropriate for the operation of the proposed supercomputing system. UPS power available to cover the critical systems including storage and access to data of the proposed system.
- Adequate capacity of air or liquid cooling for hosting the proposed system.
- At least 150 m² of floor space available for hosting the industrial-grade supercomputer and auxiliary systems.
- Raised floor able to bear at least 2200 kg/m² distributed load. In case a raised floor is not used the application should explain how the construction of the datacenter can sustain the same amount of load.
- 100 Gbit/s connectivity towards the rest of the GEANT Network (link capacity).
- Hosting physical security.
- Hosting fire mitigation equipment/procedures.
- Hosting IT access security.
- On call service support teams for IT issues
- Dedicated on-call service team for facilities issues
- Regularly measure the satisfaction of the users with the service via a user survey

Applications must include a description of the proposed industrial-grade supercomputer and hosting site, including features such as:

- Detailed description of the site hosting the system
- Description of the main features of the targeted supercomputer system, including e.g.:
  - Number of partitions
  - Main processing elements (CPU, GPUs, IPUs, FPGAs, etc)
  - Type of nodes and their configuration (e.g. accelerated, CPU-only, High memory, etc.)
  - Memory and storage capacities and architecture
  - Ratio of different node types within the system (accelerator/CPU, memory size, …)
- Expected sustained performance per partition and aggregated (Linpack and/or other performance indicators)

- Acceptance tests and benchmarks to be used for the acceptance of the industrial-grade supercomputer
- Description of how management of specific needs of industrial users for their owned software licenses, for example hosting a dedicated license server, license transfer or channelling of already in-use software licenses will be addressed.
- Other related software/services (containers, virtualisation, support of workflows, workflow management…)

12.3. Total Cost of Ownership (TCO)

The applicant should include an estimation of the cost of the industrial-grade supercomputer that the applicant has in mind to host and that has been described in the previous section "general system specifications".

The estimation of the TCO will be based on an estimation of the acquisition costs of a potential system that complies with the general system specifications. The costs related to the construction of the hosting site per se (i.e., the costs related to the building infrastructure that will host the EuroHPC supercomputer, etc.) shall not be covered by the EuroHPC JU. The costs of the preparation and adaptation of the hosting site incurred by the hosting entity that can be directly accounted to the EuroHPC Supercomputer may be considered as part of the TCO.

12.3.1. *Site preparation*

The hosting entity must be able to meet the baseline requirements set out herein in time for the anticipated timeline for the delivery of the machine in June 2025. The applicant must provide a plan of how and in what timeline the applicant intends to realise the construction of a new or the upgrade of an existing site, including costs of each action (indicating the ones that will be considered as in-kind contribution) and the definitive date at which the site will be ready for the installation of the EuroHPC system.

12.3.2. *Acquisition Costs*

Applicants must detail the estimation for the cost of the acquisition of the industrial-grade supercomputer. Applicants must indicate clearly what costs will be included in this category, how they will calculate them and who will pay for those.

12.3.3. *Operating Costs*

Applicants must provide a realistic estimation of the operating costs of the supercomputer and assurance that these costs will be covered by the applicants during the whole duration of the operation of the supercomputer until the part of the ownership of the industrial-grade supercomputer owned by the EuroHPC JU is transferred to the hosting entity after the full depreciation of the supercomputer, unless otherwise specified or agreed.

12.4. Experience of the hosting entity in installing and operating similar systems

Applicants must provide information of their experience in installing and operating supercomputers and dedicated high performance storage facilities, including at least:

1) Previous experience with installing and operating supercomputers. Provide information in case the applicant's site has experience in hosting very early releases of new systems. If relevant, applicants must provide documentation of their experience in having installed systems in the last 5 years (especially systems that ranked in the Top500 at the time of their first listing).

2) In the case of installing and operating a supercomputer for a 3rd party (the supercomputer is owned by a 3rd party and operated for them as agreed in the relevant Service Level Agreement (SLA)) or operating a supercomputing service or equivalent major infrastructure for a 3rd party (3rd party pays for a service based on a SLA, the supercomputer is owned by the hosting entity); applicants must provide a description of the service provided as well as at least one contact person from the 3rd party from whom the JU may request a reference for this service.

3) Description of the current organizational structure and the teams of people responsible for the supercomputer operation and management (including user support and specialist support of the HPC systems). If available, include current procedures and tools for system management, help desk project management, configuration management, training and education put in place.

4) Description of the current procedures adopted by the supercomputing operation and management team to monitor HPC systems. Please indicate which of these are these are in-house and which are 3rd party solutions; how they have been integrated and customized. List any current Quality Control certifications your organization has obtained for system management, help desk project management, configuration management, training and education.

5) Description of the current procedures adopted by the supercomputing operation and management team to trace and resolve issues and communicate them to users and other stakeholders. Include description of current procedures adopted by the supercomputing operation and management team to ensure that service level agreements are met.

6) Description of any current continuity procedures the operations team or the Network Operations Centre (NOC) has in place and description of current workload management software and methodology (bonus/malus; backfill; etc.) in place.

7) Description of previous experience in providing supercomputer access and other related services to users from other member states or pan European environments .

12.5. Quality of the hosting facility's physical and IT infrastructure, its security and its connectivity with the rest of the Union

Applicants must provide information of the hosting physical and IT infrastructure, including security and connectivity that the site can provide for the industrial-grade supercomputer.

For the site preparation, the hosting entity must be able to meet the baseline requirements set out herein in time for the anticipated timeline for the delivery of the industrial-grade supercomputer by mid-2025 and the operations by the last quarter of 2025. The applicants must provide a plan of how and in what timeline the applicant intends to realise the upgrade of the site, including the definitive date at which the site will be ready for the installation of the industrial-grade supercomputer. This may include, but is not limited to Gantt charts, contractual timelines, construction permits and work contracts status.

Applicants should include (at least) the following information related to the current and proposed capacities of the hosting facility and how to achieve them:

1) Description of the intended hosting entity site and facility, including cooling methods and experience on cooling systems, power measurement facilities, accessibility, possibility to accommodate visitors, courses, possible extendibility of the site (m² and KW) and description of physical security concept, including access control, CCTV, etc.

2) Power measurement facilities in place at infrastructure level and where (device type, location of measurement à at rack, PDU, centre) and maximum levels of energy measurement according to the EE HPC Power Measurement Methodology. If available, reference to any memberships of energy

efficiency interest groups or codes of conduct (e.g. EE HPC WG, EU Code of Conduct, EMAS, or other); certifications for energy efficiency and sustainability (e.g. ISO / IEC 13273).

3) Information about the connection to the power grid, including maximum capacity of connection to the power grid and other characteristics such as redundant connection to the power grid. Information about power grid quality (number of outages from supplier in last 48 months, starting January 1st 2019) and energy procurement method (e.g., long-term contracts, annual market based purchases, other).

4) Information about availability of the data centre: expressed as a minimum percentage of uptime or in maximum number of hour's downtime that the hosting entity deem are acceptable per year. Average availability of data centre infrastructure (cooling, power, etc.) (over the last 24 months for current)[10].

5) Information about connectivity towards the rest of the GEANT Network (link capacity) and the Network Operating Centre (NOC) and its reachability (e.g. 24/7).

6) Facility managers (in-house or outsourced) involved in ensuring the operation of the data centre, and their specialization.

7) Total memory and storage capacities of the centre, defining what part would be dedicated to the industrial-grade supercomputer.

12.6. Quality of service to the users, namely capability to comply with the service level agreement

The applicant should specify the benchmarks or deliverables which the applicant intends to employ to achieve the expected results and targets and how they will be used. These should include at least the SLAs in the Hosting Agreement and information related to:

1) Access time accounting model that will be used to control the allocation time of the supercomputer. Provide historic system uptake and usage for recent HPC systems.

2) Availability of main HPC systems over last 12 months if the system has been operational for at least 18 months. If the system has been operational for less, please provide availability numbers based on the duration for which the system has been in full production. This should include hours of scheduled maintenance and hours of unscheduled maintenance.

3) Availability of helpdesk; number of active projects currently supported. Description of services provided by user support (e.g. 1st level, 2nd level, application support) and of policy regarding response times for level 1, 2 and 3 tickets[11]. Description of support services provided to industry.

4) Overview of training course curriculum related to HPC and scientific computing and links towards user documentation pages, user tutorials and webinars[12].

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[10] Facility is deemed available when no facility issues are affecting the running of the supercomputing service. Availability = total hours – (scheduled + unscheduled downtime).

[11] Level 1 => simple request, can be solved in 1 day; Level 2 => more complex request, requires some research, can take up to 5 working days to resolve, Level 3 => request that requires vendor response to resolve, may take longer than 5 working days.

[12] Or provide electronic copies if these are not reachable online or without a user account.

5) Description of how the on-call service (24/7) for the supercomputing service and infrastructure facilities are set up and work. Include, if available, results from the user satisfaction surveys for your site for the last 5 years.

6) Fraction of time for which the current supercomputing service (supercomputer + all necessary auxiliary services like storage, network, login nodes, etc. + main software services like scheduler, access to file systems, etc.) has been available over the last 12 months[13]?

7) Do you perform regular regression tests to assess the stability of performance of your current supercomputer service? If yes, please provide a description of the regression test used and the frequency at which it is run.

8) Does your site provide any additional services that may not be critical to running the supercomputing service but may provide an additional benefit to the end user? If yes, please provide a description of these services.

Applicants must provide details on how these tasks are currently done and how they propose to achieve them for the hosting of the industrial-grade supercomputer. Applicants must indicate subcontracted action tasks (if any) and explain the reasons why (as opposed to direct implementation).

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[13] Available = fully up and running and reachable by the users and at least 98% of compute nodes available.