NATIONAL SUPERCOMPUTING MISSION

INFRASTRUCTURE | APPLICATIONS | R&D | HRD

Expression of Interest

For

Selection of Collaboration Partner for Design and Development of Rudra-GRX Server

EoI No.: CDACP/EOI-RUDRA-GRX-PARTNER/24-25/407

Dated: 14.06.2024

Centre for Development of Advanced Computing

A Scientific Society of Ministry of Electronics & Information Technology, Government of India
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Sr. No.	EoI No. & Date of Release	CDACP/EOI-RUDRA-GRX-PARTNER/24-25/407
1	Organization Details	HPC Technologies Group, (HPC-Tech), Centre for Development of Advanced Computing, A Scientific Society of the Ministry of Electronics and Information Technology, Govt. of India, Innovation Park S.No.34, B/1, Panchavati, Pashan Road, Pune, Maharashtra 411008.
2	Last Date of Sending Queries	Latest by 20-06-2024- 1600 hrs.
3	e-mail id for sending queries & the final proposals etc.	savita@cdac.in
5	Last Date of Submission of Proposals on email in pdf	On or before 8 July 2024 - 15.00 hrs
6	Date of Opening of Proposals	8 July 2024 - 16.00 hrs

1. **Disclaimer**

Centre for Development of Advanced Computing (herein after called C-DAC) has prepared this Expression of Interest (EoI) document solely to invite prospective product organizations for collaboration.

While C-DAC has taken due care in compiling of information contained herein and believes it to be accurate, neither C-DAC or any of its authorities or agencies nor any of their respective officers, employees, agents or advisors give any warranty or make any representations, express or implied as to the completeness or accuracy of the information contained in this document or any information which may be provided in association with it.

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C-DAC reserves the right not to proceed with the bidding/EoI process at any stage without assigning any reasons thereof, or to alter the timetable reflected in this document or to change the process or procedure to be applied.

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2. **Introduction**

Centre for Development of Advanced Computing (C-DAC), an autonomous scientific society of Ministry of Electronics and Information Technology (MeitY), Government of India, was established in 1988, to develop indigenous ICTE solutions for the country to meet its societal and scientific obligations including building supercomputing systems. It has been leading the country's efforts in developing and deploying various generations of PARAM series of Supercomputers in India and abroad.

The National Supercomputing Mission (NSM) initiated by the Government of India aims at achieving the goals of attaining self-reliance in supercomputing and problem solving in various domains of scientific and technological endeavours.

Under this mission, C-DAC is continuing to create infrastructure of family of supercomputers of varying capacities spanning a wide range. One of the key modalities in this mission is to use indigenous build approach, where in design and manufacture of virtually all sub-assemblies that go into the making of these Supercomputers are carried out in India.

Under the build approach, C-DAC has designed and developed a compute server "Rudra" as one of the sub-assemblies required for Supercomputer. A Supercomputing system based on Rudra server has been working and operational at C-DAC and IUAC, Delhi. Rudra Server has been benchmarked with HPL, HPC application benchmarks and cloud benchmarks. C-DAC is

in designing process of its next generation server platform.

With the Government of India's aggressive push towards complete digitization of transactions and services, the demand for data centres and hyper-converged infrastructures is poised to grow exponentially. Needless to say, a completely indigenous server like RUDRA which is designed, developed and manufactured in the country will have an exceptionally greater acceptance and have an edge in "security conscious" environments and businesses. The fact that C-DAC is involved in HPC sector for the past Thirty years will bring with it, the technological prowess to come out new server designs to meet the changing demands of the markets and provide a robust business continuity plan for RUDRA series of servers.

3. **Objective**

C-DAC is planning to design and develop Rudra-GRX Server based on Intel's Granite Rapids processor in Open Compute form factor with available standard eight GPU Universal Base Board (UBB)/industry form factor.
The objective of this EoI is to collaborate with Product organizations in ICTE areas for designing and productizing the server platform.

Such collaborators with their expertise in related areas should be poised to explore new avenues jointly. They should be suitably equipped to co-create along with C-DAC and provide the requisite resource (finances) for proposed solutions research. Once the collaborative R&D shapes up based on the strengths of each party into a product/solution the revenue will be shared based on present valuation of the technology and value added to it by respective parties for making commercial product/solution.

4. **Instructions for On-line Proposal Submission**

Please refer to link https://cdac.in/index.aspx?id=pdf_IoA_Collaboration_Innovation_V10 on C-DAC Corporate website - www.cdac.in under Tender/ EoI. The final proposal to be submitted via email at `savita@cdac.in' with all relevant & valid documents as stipulated in the EOI document.

(END OF SECTION I)

Eligibility Criteria: The prospective agencies must fulfil the minimum eligibility Criteria mentioned in IoA (Intent of Association for Collaborative Association) on C-DAC website cdac.in under Tender/ EoI; link given below

https://cdac.in/index.aspx?id=pdf_IoA_Collaboration_Innovation_V10

Technical Eligibility Criteria:

The bidder must comply with the minimum eligibility criteria stipulated below.

a. The bidder should be a product company/organization/OEM of servers.
b. The bidder must have prior experience in design and productization of servers based on X86 architecture including PCB design and mechanical design.
c. The Bidder must have all the tools/test-jigs required to carry out the stipulated tasks.

Amendments to EoI Document

a. At any time prior to the deadline for submission of proposals, C-DAC may, for any reason, whether on its own initiative or in response to the clarification request by a bidder, modify the EoI document.
b. The amendments to the EoI documents (if any) will be notified by release of corrigendum notice on C-DAC website/CPP Portal. The amendments/modifications will be binding on the bidder.
c. C-DAC at its discretion may extend the deadline for the submission of proposals if it thinks necessary to do so or if the proposal document undergoes changes during the submission period, in order to give bidder time to take into consideration the amendments while preparing their proposals.
d. C-DAC reserves the right to cancel the said EoI without assigning reasons thereof.

Brief description:

Rudra-GRX server will be based on dual socket Intel's Granite Rapids Processors supporting DDR5 Memory and 8GPU subsystem (Off the shelf standard OCP Universal Base Board carrying 8 GPUs from Intel, AMD, NVIDIA or industry standard board carrying 8GPUs like NVIDIA HGX).

Scope of work:

Design and development of Rudra-GRX server based on Granite Rapids interfacing with 8GPU off-the-shelf Board

Product Dimensions:

- ½ width/Full width 1 OU form factor

Key Applications:

- High-performance and AI computing,

Technical Submission:

1. Documents supporting Eligibility
2. Technical Proposal including understanding of the scope, Brief technical details of the design of server, proposed collaboration in terms of work and resource sharing, Estimated investments from both sides, proposed revenue share, etc.

(End of Section – III)