

**भारतीय उष्णदेशीय मौसम विज्ञान संस्थान**  
**INDIAN INSTITUTE OF TROPICAL METEOROLOGY**  
 (पृथ्वी विज्ञान मंत्रालय, भारत सरकार का एक स्वायत्त संस्थान)  
 (An autonomous Institute under the Ministry of Earth Sciences, Govt. of India)  
 पाषाण, पुणे - 411 008  
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**वैश्विक निविदा सूचना शुद्धिपत्र / CORRIGENDUM TO GLOBAL TENDER NOTICE**

निम्नलिखित तालिका में विनिर्दिष्ट समसंख्यक निविदा सूचना द्वारा प्रकाशित विवरण हेतु निविदा प्रस्तुत करने की निर्धारित तारीख को बढ़ाया जा रहा है।

The last date of submission of bids for purchase of "items / description" published vide even number of Tender Notice is extended as tabulated below

क्रम सं. Sr. No.	निविदा सूचना सं. Tender Notice No.	विवरण/Description	ऑनलाइन बोलियाँ प्रस्तुत करने की बढ़ाई गयी समय सीमा / Extended timeline for submission of bids online	
			के पास से From	तक To
01.	पीएस/125/01/2021 PS/125/01/2021	पृथ्वी विज्ञान मंत्रालय, भारत सरकार के विभिन्न संस्थानों में स्थापित किए जाने वाले "उच्च प्रदर्शन कंप्यूटिंग (एचपीसी) " सोल्युशंस की आपूर्ति, स्थापना, कमिश्निंग और संतोषजनक डेमोनस्ट्रेशन  SUPPLY, INSTALLATION, COMMISSIONING, AND SATISFACTORY DEMONSTRATION OF "HIGH PERFORMANCE COMPUTING (HPC) SOLUTIONS TO BE INSTALLED AT VARIOUS INSTITUTES OF MINISTRY OF EARTH SCIENCES GOVT. OF INDIA".	03 अगस्त 2021 1200 बजे से /  03 <sup>rd</sup> August 2021 1200 hrs.	12 अगस्त 2021 1200 तक  12 <sup>th</sup> August, 2021 1200 hrs.
उपरोक्त निविदा के लिए बोलियाँ 12 अगस्त, 2021 को 1500 बजे खोली जाएंगी। EOI for aforesaid tender will be opened on 12 <sup>th</sup> August, 2021 at 1500 hrs.				

दिनांक 16 जुलाई, 2021 को हुई निविदा-पूर्व बैठक का अंतिम कार्यवृत्त भी नीचे विनिर्दिष्ट वेबसाइट पर उपलब्ध है। अन्य निबंधन एवं शर्तें यथावत रहेंगी। विस्तृत विवरण एवं बोलियों के प्रस्तुतीकरण हेतु कृपया वेबसाइट <https://moes.euniwizarde.com> देखें। संभावित बोलीदाताओं की जानकारी के लिए, निविदा विवरण भी इस संस्थान की वेबसाइट <http://www.tropmet.res.in> एवं सरकार के सेंट्रल प्रोक्यूरमेंट पोर्टल (सीपीपी) <http://www.eprocure.gov.in> पर भी उपलब्ध है। संस्थान किसी भी स्तर पर बिना किसी कारण बताए निविदा को पूरा या आंशिक रद्द करने का अधिकार सुरक्षित रखता है।

Also final minutes of Pre-EOI Discussion meeting held on 16<sup>th</sup> July, 2021 are available on websites as stated below. All other terms & condition shall remain unchanged. For details and submission of bids please visit website <https://moes.euniwizarde.com>. For the information of the prospective bidders, the tender details are also available on this Institute's Website: <http://www.tropmet.res.in> and Government's Central Procurement Portal (CPP) <http://www.eprocure.gov.in>. The Institute reserves the right to cancel the tender at any stage either in full or part as the case may be without assigning any reason thereof.

ह/Sd-  
 प्रशासनिक अधिकारी, कृते निदेशक  
 Administrative Officer, for Director  
 ईमेल/Email : [psu.iitm@tropmet.res.in](mailto:psu.iitm@tropmet.res.in)

**Indian Institute of Tropical Meteorology**

**Ministry of Earth Sciences**

**July 16, 2021**

**Sub: Minutes of the Pre- EOI submission Discussion Meeting held online on  
16.07.2021 at 11:00 hrs.**

Ministry of Earth Sciences (MoES) has constituted an EOI Expert Committee vide OM No. MoES/1 6/40/14-HPC-Committee dated 04.06.2021 for augmentation of High-Performance Computing facility for Institutes under Ministry of Earth Sciences, Govt. of India.

Expression of Interest (EOI) for the augmentation High Performance Computing facility for institutes under Ministry of Earth Sciences, Govt. of India was floated on 5th July 2021 in the portals <https://moes.euniwizarde.com>, <https://www.tropmet.res.in> and <https://www.eprocure.gov.in>

The EOI pre-discussion meeting was held on 16.07.2021 @ 1100 hours through Video Conferencing.

The committee discussed about the process followed till date for augmentation of new HPC System. It was informed to the committee that the EOI was published, and the last date of submission of the EOI response is 03.08.2021. Further, various vendors collected the benchmark codes as stipulated in the EOI through the FTP server provisioned at IITM, Pune. A copy of benchmarks/input files was also collected from IITM on hard disks.

It was pointed out that the committee also needs to address all the clarifications sought by the vendors/prospective bidders and necessary modification(s), if any, and the exact needs to be communicated to the bidders by publishing a corrigendum. Committee went through the queries received from various vendors and discussed each one of them in detail. The committee invited the vendors who had requested for attending the pre-discussion meeting. The representatives of the following firms attended the pre-EOI discussion meeting.

1.	M/s. Atos India Pvt Ltd
2.	M/s. Dell Technologies
3.	M/s. HPC Presales (HEWLETT PACKARD ENTERPRISE)
4.	M/s. Niyura Technologies Private Limited
5.	M/s. HPC & AI Business-INTEL
6.	M/s. AMD India Pvt Ltd
7.	M/s. IBM India Pvt. Ltd
8.	M/s. NVIDIA
9.	M/s. NEC Corporation India Pvt. Ltd.
10.	M/s. Lenovo Global Technologies Ltd
11.	M/s. HPC & AI- DDN
12.	M/s. NetApp India Marketing & Services Pvt Ltd
13.	M/s. Altair   Nasdaq: ALTR
14.	M/s. Yotta Infrastructure Solutions LLP
15.	M/s. SS Information Systems Pvt Ltd.,

The queries and their responses were shared and discussed with all vendors. The committee observed specific common questions for which a clarification is required, and the same is being elaborated below.

- a. Digital signature will also be considered for signing the bid document.
- b. Vendors need to submit Evidence of technical & financial capability, including annual audited accounts for the past five (05) years ending 31st March 2020. Certificate from Chartered Accountant for the Net worth Criteria. If there is a delay in certified documents for the current financial year because of the pandemic, then the same shall be granted.
- c. The bidder must be a legal entity incorporated/established under appropriate Law. The bidder should submit a duly certified Certificate of Registration of Incorporation authenticating the above aspects. Details of Service/ support centres in India may also be submitted (like address, manpower details, PAN Number, GST Number, Indian Nationalized Bank Account / **Any Scheduled Commercial bank in India** etc.). For services and support provided, payments will be made only in INR.
- d. It has been clarified that EMD / Tender fee is not required for the EOI stage; however, vendors need to submit the undertaking as per the Annexure-V of EOI.
- e. Based upon requests from various vendors, the last date for submission of EOI response is extended till **12.08.2021 up to 12:00 hrs.**
- f. Hard Copies of the EOI Response should be submitted within 5 days after the last date of submission.
- g. Vendors are advised to take due care in submitting the data on USB Disk/Tape. In case of corruption of the media, MoES will request OEM to re-submit the data within 3 days. However, the data should be as per the log files submitted.
- h. The vendors' benchmarks output shall include output files generated by the scripts supplied by MoES together with logs and modified codes.
- i. The minimum size of the benchmarking system should be 500 Tera Flops.
- j. For the EOI stage, vendors can use third party infrastructure, provided the system being proposed is of the same configuration. However, at the RFP stage, the system needs to be the same as proposed and should be their own infrastructure. Projections to the next generation processors can be estimated. It is reiterated that the benchmarks should be ported by the OEM submitting the bid. This is allowed by MoES due to the reason that several processors are available in the market and not all OEMs will have access to these emerging technologies for practical use during the EOI stage.
- k. Vendors are free to submit additional inputs. However, the mandatory benchmarks should be of the same version as listed in Eoi document.
- l. Regarding Data Center requirement, the details will be provided in the RFP; however, vendors are encouraged to carry out site visit with prior intimation even during this EOI stage
- m. Vendors can continue to interact with IITM (hpc3@tropmet.res.in) for benchmark related queries/clarifications until 3rd August 2021. However, vendors were advised to consolidate and raise their queries/clarifications. No queries/clarifications shall be entertained after 3rd August 2021, 1700, hrs. IITM will host replies to all such queries on a suitable online platform for the benefit of all bidders.

The committee arrived at appropriate responses for all the queries to the satisfaction of all the bidders present in the meeting. The queries and their final responses are placed at Annexure-I.

**Recommendation:**

The committee recommended that Annexure I and all the common clarifications(a-m) need to be published for the benefit of all bidders and maximum participation.

The meeting ended with thanks to the Chair.

**Queries of Vendors for Pre- EOI submission Discussion Meeting**

**Annexure-I**

<b>M/s. Atos India Pvt. Ltd.</b>				
<b>Sl. No.</b>	<b>Reference</b>	<b>Details</b>	<b>Query</b>	<b>Reply / Remarks</b>
1	Pg. 8.g	g) Supply and Support of any intermediate latest software, scientific libraries, compilers etc. for smooth running of weather, ocean, and earth system applications at regular intervals as and when the versions get upgraded periodically and without compromising the stability of the HPC system at no extra cost.	We presume it is limited to supply of HPC system software & libraries supplied by us as part of the deliverable for this tender.	Yes
2	Pg. 8.h	h) It is highly desirable that all the software licenses that are supplied within the scope of work are right-to-use perpetual licenses for an unlimited number of concurrent users and should be supported by respective OEMs in the name of respective MoES Institutes. For e.g.: compilers, libraries, parallel file system etc.	At this stage which specific compilers, libraries, PFS will be required. During the RFP stage we will discuss the licencing terms with respective software vendors and if such options are available then we will discuss with MoES and provide the same.	Ok
3	Pg. 8.i	i) Supply and Installation of an additional AI/ML System which is at least 2 percent (out of which 50% CPU and 50% Accelerator) of the total capacity as a standalone system with the provision to update with latest technologies in terms of processor, interconnect, storage, software, etc. at least two times during the warranty period and two times during the AMC period	2% should be calculated on the overall size of the cluster during submission? What will be the range of variation of upper bound over the range of the contract period? With every upgrade will the old nodes be returned or retained back? The choice of CPU /Accelerator has to be made in discussion with the OEM based on their portfolio available at that time and implication on space, cooling, power requirement.	More details of these will be available in the RFP

Queries of Vendors for Pre- EOI submission Discussion Meeting

Annexure-I

4	Pg. 9.k	k) For setting up the data centre needed to host the proposed HPC solution. MoES will provide the physical civil structure, electricity, power and provide details on other infrastructure available with each of the two MoES sites. The bidder must supply and effortlessly integrate the necessary additional infrastructure in terms of DG Power, UPS, BMS, necessary cooling, entire data centre ecosystem as per the requirements of their proposed HPC solution. The vendors are encouraged to use the existing infrastructure, if the same is useful for the proposed solution and serviceable up to next 5 years.	Please provide details of existing DC. Should we consider 5 years or 6 years?	As per EOI (Site visits are encouraged)
5	Pg. 13.e	e) Please note that all the pages of the EOI documents should be signed with date and seal of the Bidder.	Request you to consider digital signature	Digital Signature will aslo be considered
6	Pg. 14.m	m) The Bidders should sign on each page in their response to this EOI.	Request you to consider digital signature	Digital Signature will aslo be considered
7	Pg. 16.g	g) Undertaking from the bidder towards Earnest Money Deposit (EMD) (Annexure-V)	We assume the EMD will be required at the RFP stage.	An Undertaking to be furnished by the bidders as per Annexure-V of EOI

Queries of Vendors for Pre- EOI submission Discussion Meeting

8	Pg. 15.A	In case of Dispute or difference arising between the Purchaser / Buyer and a domestic supplier relating to any matter arising out of or connected with this EOI, such disputes or difference shall be settled in accordance with the Indian Arbitration & Conciliation Act, 1996 and its subsequent amendments, the rules there under and any statutory modifications or re-enactments thereof shall apply to the arbitration proceedings. The dispute shall be referred to The Secretary, Ministry of Earth Sciences, Govt. of India and if he / she is unable or unwilling to act, to the sole arbitration of some other person appointed by him / her willing to act as such Arbitrator. The award of the arbitrator so appointed shall be final, conclusive and binding on all parties.	Please consider revised clause provided below for reference:  In case of Dispute or difference arising between the Purchaser / Buyer and a domestic supplier relating to any matter arising out of or connected with this EOI, such disputes or difference shall be settled in accordance with the Indian Arbitration & Conciliation Act, 1996 and its subsequent amendments, the rules there under and any statutory modifications or re-enactments thereof shall apply to the arbitration proceedings. The dispute shall be referred to a mutually appointed sole arbitrator. The award of the arbitrator so appointed shall be final, conclusive and binding on all parties.	As per EOI
9	Pg. 1	Last date of submission of EOI on online mode : 3rd August 2021 at 1200 hrs.	Request you to extend submission date to 3rd September 2021	Last date of submission of EOI responses is extended upto 12.08.2021 up to 12:00 hrs
10	Pg. 11	INCOIS_MOM5	Validation procedure is not provided. Kindly provide the procedure to validate the results.	Further details are provided at ftp
11	Pg. 11	INCOIS_MOM5	In the table it is mentioned for 5 day simulation. But in the input.nml I see days = 10. Can you please reverify the input.nml file?	5 days simulation will be accepted
12	Pg. 11	INCOIS_MOM5	Is the reference runtime provided in Readme for 5 or 10 day simulation?	as above
13	Pg. 11	CFSV3	Can you please confirm Initial condition as there is difference between initial conditions given in data set and mentioned in README?	The initial conditions are present in the folder ~/CFS_v3/oper_cfsv2analysis_ics for the year 2011040100
14	Pg. 11	CFSV3	In table duration of simulation is 16days and user.config given for 35 days	The NDAYS=35 in user config is over-ruled by FHMAX=384 hours in 02.run_UGCS.sh

Queries of Vendors for Pre- EOI submission Discussion Meeting

15	Pg. 11	CFSV3	Validation procedure is not provided. Kindly provide the procedure to validate the results.	The validation steps are now provided at ftp site in RMSE_Output_verification_scripts folder
16	Pg. 11	GFS_TCO	Validation procedure is not provided. Kindly provide the procedure to validate the results.	Further details are provided at ftp
17	Pg. 11	NCMRWF_coupled	Validation procedure is not provided. Kindly provide the procedure to validate the results.	Further details are provided at ftp
18	Pg. 11	NCMRWF_NEMO_v3.6	Validation procedure is not provided. Kindly provide the procedure to validate the results.	Further details are provided at ftp
19	Pg. 11	HWRH-HYCOM	Validation procedure is not provided. Kindly provide the procedure to validate the results.	Further details are provided at ftp
20	Pg. 11	System Size: The minimum size of the benchmarking system should be 1 Peta flops.	Is this applicable for Accelerator enabled applications benchmarks run as well? What size of the system or number of accelerators run for accelerator enabled application benchmarks?	Size of accelerator system can be decided by OEM. However, the system size should not be smaller than the system used by MoES.
21	Pg. 11	"The bidders are not allowed to do code level optimization of the benchmark programs. If there are any modifications to enable porting and execution of the benchmark programs on the vendor's machine, the modification details should be submitted. Any system level configuration changes to support porting and execution of the benchmark programs should also be clearly detailed and submitted along with the results."	Please clarify. Example - if the code has to be modified or optimized to run/take advantage of the accelerator, is it allowed?	Yes, the details regarding this is mentioned in the clause referred
22	Pg. 11	Weather bench Code	There is no reference output given. Please clarify if this is missing or only wall clock time is the reference?	Further details are provided at ftp

Queries of Vendors for Pre- EOI submission Discussion Meeting

23	Pg. 11	WRF (1km)	Is it allowed to run and submit Accelerator/GPU enabled WRF version (3.8.1) for benchmarking ? The latest WRF GPU enabled version is 3.8.1, whereas the version suggested in Benchmark Suite readme (WRF.pdf) in 4.2 which is a CPU only version. If you accept this clause, please provide reference output for accelerator version	OEMs are free to submit additional inputs. However the mandatory benchmarks should be of the same version as listed in Eoi
24	Pg. 11	WRF (1km)	On FTP site, WRF run directory has input and output data. Can those be used to make benchmark run ? WRF.pdf says, input should be obtained from wrfinput.tar however, wrfinput.tar is not available on FTP page. Please clarify.	Please use the input files in WRF-4.2.2/test/em_real/met_*

**M/s. Dell International Services India Private Limited**

S. No.	EOI Document Reference(s) (section number/page)	Content of RFP requiring clarification	Points of clarification required.	Reply / Remarks
1	Page 35	Bidder has to select the payment option as “e-payment” to pay the tender fee / EMD as applicable and enter details of the instrument.	Request IITM to clarify whether we can submit the tender fee/EMD in the form of BG	There is no Tender fee for this EOI. The bidders have to furnish an Undertaking as per Annexure-V of EOI towards EMD. Details of EMD will be provided in RFP as per GFR, 2017.
2	Page 13 & 34	e) Please note that all the pages of the EOI documents should be signed with date and seal of the Bidder. 2. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document as a token of acceptance of the terms and conditions laid down by Railtel	Since we are digitally signing all the documents during the portals upload, Request IITM to remove the clause requesting all the pages of the EOI documents should be signed with date and seal of the bidder.	Digital signature should suffice

3	Page 2	<p>While submitting commercial bid, the Bidder shall deposit an amount _____ (to be specified in RFP) as Earnest Money/ Security Deposit, with the BUYER through any of the following instruments:</p> <p>i) Bank Draft or a Pay Order in favor of _____</p> <p>ii) A confirmed guaranteed by an Indian Nationalized Bank. Promising payment of the guaranteed sum to the BUYER on demand within three working days without any demur whatsoever and without seeking any reason whatsoever. The demand for payment by the BUYER shall be treated as conclusion proof of payment.</p> <p>iii) Any other mode or through any other instruments (to be specified in the RFP).</p>	<p>Request IITM to clarify whether we need to submit any EMD and Tender Fess during EOI submission? If yes request to share the EMD value, Tender Fees and EMD format</p>	<p>please refer sr. No. 1 above</p>
4	Page 16	<p>n) Evidence of technical &amp; financial capability, including annual audited accounts for the past five (05) years ending March 31, 2021. Certificate from Chartered Accountant for the Net worth Criteria.</p>	<p>Dell can provide last 5 years financilas till year ending Mar 2020, due to current situation 2021 financials can be shared after September '21</p>	<p>Agreed</p>
5	Page 18	<p>9.3 Last date of EOI submission : 03 Aug 2021 up to 12:00 hrs.</p>	<p>To prepare a response during the current situation for EOI with the necessary documentation, internal contracting and approvals we need more time and accordingly, we request IITM to extend the due date to respond to EOI by 1 month to at least 3rd September 2021.</p>	<p>Last date of submission of EOI responses is extended upto 12.08.2021 up to 12:00 hrs</p>

6	New	Request to include Limitation of Liability clause	Proposed Limitation of Liability Clause: Whether in contract, tort (including negligence) or otherwise, the total liability of bidder shall be limited to the amount paid customer paid to bidder during the 12 months before the date that the matter or dispute arose. Bidder has no liability to the other for special, consequential, exemplary, punitive, incidental or indirect damages, or for lost profits, loss of revenue, loss or corruption of data, loss of use or procurement of substitute products or services.	No as per EOI. Relevant liability clauses will be spelt in RFP.
7	Page 10	e) The bidder must be a legal entity incorporated / established under appropriate Law. The bidder should submit duly certified Certificate of Registration of Incorporation authenticating above aspects. Details of Service/ support centers in India may also be submitted (like address, manpower details, PAN Number, GST Number, Indian Nationalized Bank Account etc.). For services and support provided, payments will be made only in INR.	Request IITM to confirm is it mandatory to have Indian Nationalized Bank Account or any Scheduled commercial banks will do?	Any Scheduled Commercial bank in India will be accepted
8	Page 8	2.0 Purpose of this EOI	We requests IITM to clarify how much minimum memory per core is expected?	Details will be provided in RFP( for the purpose of this EOI the memory required for successful porting of application benchmarks is provided in Table)
9	Page 8	2.0 Purpose of this EOI	Dell recommends the scratch area to be separate from home. Request IITM to clarify on the split between the scratch and home and their minimum respective throughputs needed.	Details will be provided in RFP

10	Page 8	2.0 Purpose of this EOI	Dell requests IITM to clarify whether the existing data needs to be migrated to the new storage OR will it be continued to be used with access to the new cluster	Details will be provided in RFP
11	Page 8	3.0 SCOPE OF WORK FOR PROPOSEDPROCUREMENT	Dell recommends CPU:GPU ratio of 1:2 We request to clarify regarding the same	Details will be provided in RFP
12	Page 10	5.0 Benchmark Tests:	Dell requests IITM that the minimum size of benchmarking system be relaxed from 1 Peta Flops to 300TFlops peak.	The minimum size of the benchmarking system should be 500 Tera Flops.
13	Page 10	5.0 Benchmark Tests:	Request IITM to confirm whether it can accept results for WRF on both CPU and GPU ?	Yes
14	New	New Request	Request IITM to confirm that it will not re-distribute the source code for WRFG	Code may be used within MoES and will be informed to all users not to re-distribute.
15	Page 8	Point no.i	Dell requests IITM to confirm for 200 Teraflops count of CPU also includes the Teraflops count of CPUs on the GPU nodes	More details will be provided at the time of RFP
16	Sec 5.0 First Paragraph	System Size: The minimum size of the benchmarking system should be 1 Peta flops.	Is this applicable for Accelerator enabled applications benchmarks run as well? What size of the system or number of accelerators run for accelerator enabled application benchmarks?	yes, the size for accelerator system shuld be decided by the vendor, However size should not be smaller than the one used by MoES

17	Sec 5.0 Second Paragraph	This is only to demonstrate the bidders' capability to port and run the benchmarks and use this information to finalize the Request for Proposal. The benchmarks should be run by the OEM only who is responding to this EOI. Benchmark submitted by any third party will not be accepted.	If the bidder has to integrate multiple OEM systems (Example - CPU system from same as bidder and GPU System from another OEM), is the respective benchmarks acceptable ?. Request to accept this clause as many bidders/CPU System OEMs may not have adequate GPU systems required for the benchmark in their benchmark centres Or may have to integrate GPU technology vendor's system into their bid (and whereas some of the leading GPU technology system providers do not bid directly or offer systems integration services) In addition to the above, as our cluster is is being upgraded to Icelake, can we use a third party cluster to run the benchmarks	For the purpose of the EOI it should be fine. But during the RFP stage all benchmarks need to be executed in an integrated cluster addressing the same file system
18	Sec 5.0 First Paragraph	"The bidders are not allowed to do code level optimization of the benchmark programs. If there are any modifications to enable porting and execution of the benchmark programs on the vendor's machine, the modification details should be submitted. Any system level configuration changes to support porting and execution of the benchmark programs should also be clearly detailed and submitted along with the results."	Please clarify. Example - if the code has to be modified or optimized to run/take advantage of the accelerator, is it allowed?	Yes, the details regarding this is mentioned in the clause referred
19	Benchmark Suite	Weatherbench Code	There is no reference output given. Please clarify if this is missing on only wall clock time is the reference	Further details are provided at ftp server

20	Sec 5.0, Table 1, Sr. No. 10 & Benchmark Suite	WRF (1km)	Is it allowed to run and submit Accelerator/GPU enabled WRF version (3.8.1) for benchmarking ? The latest WRF GPU enabled version is 3.8.1, whereas the version suggested in Benchmark Suite readme (WRF.pdf) in 4.2 which is a CPU only version. If you accept this clause, please provide reference output for accelerator version	OEMs are free to submit additional inputs. However the mandatory benchmarks should be of the same version as listed in EoI
21	Sec 5.0, Table 1, Sr. No. 10 & Benchmark Suite	WRF (1km)	On FTP site, WRF run directory has input and output data. Can those be used to make benchmark run ? WRF.pdf says, input should be obtained from wrfinput.tar however, wrfinput.tar is not available on FTP page. Please clarify.	Please use the input files in WRF-4.2.2/test/em_real/met_*
22	New	New Request	As we are initiating benchmarks now, we do not have consolidated queries for benchmarks at this point of time. Hence we request another round of Pre-bid in by 4th week of July for clarification on benchmarks queries. Or as and when we get queries on benchmarks, request you to share a point of contact to clarify the same.	Queries on b/m can be addressed till seven days before the submission of bid. There cannot be another pre-bid
23	New	New Request	Request IITM to approve the Site visit requirement for Data Center design and planning if required	The contact person at IITM is Mahesh Dharua (nilkantha@tropmet.res.in) and NCMRWF is Athiyaman (athiya@ncmrwf.gov.in). They can be contacted for any site visit

## M/s. HPE

## HPE Pre-bid Clarifications - EOI PS/125/01/2021/EOI

Sl#	Reference	Existing Clause	Clarifications Sought	Reply / Remarks
1	Page 8 - Point # 3 (i)	Supply and Installation of an additional AI/ML System which is at least 2 percent (out of which 50% CPU and 50% Accelerator) of the total capacity.	Since the RFP system will have some GPU components, MoES may kindly leave the ratio flexible on the bidder.	Details will be provided in RFP
2	Page 9 - Point # 3( k )	The bidder must supply and effortlessly integrate the necessary additional infrastructure in terms of DG Power, UPS, BMS, necessary cooling, entire data center ecosystem as per the requirements of their proposed HPC solution.	Is it possible to know more about the DC details in terms of infrastructure where these systems are intended to be hosted ? Is it possible to conduct a DC survey during the EOI phase or will it be allowed only during the RFP stage ?	Yes, MoES encourages OEMs to carryout the site survey at any stage to reduce the delays.
3	Page 9 - Point # 4( c )	The bidder should submit duly certified logs, supporting letter from the buyers for authenticating above aspect.	Kindly relax the certified logs as a requirement, since customers may not be willing to share these confidential information.	Agreed
4	Page 16 - point # q	Submission of EOI: EOI should be submitted on <a href="https://moes.euniwizarde.com">https://moes.euniwizarde.com</a> on or before 03 Aug 2021 up to 12:00 hrs and <u>should also submit sealed envelope clearly marked "EOI for High Performance Computing Solution Systems – 2021 to IITM, Pune.</u>	Do we need to submit a hard copy of the EOI response also ? If yes, kindly allow at least one week post the EOI submission date to submit the EOI response.	Hard Copies of the EOI Response should be submitted with in 5 days after last date of submission
5	Page 16 - point # s	Modified codes, outputs, logs, profiling details etc. in a separate media (e.g., Tape/USB disk etc.). It is the responsibility of the vendor to ensure integrity of the data submitted to MoES.	In case of a failure of the submitted media, we request MoES to allow sufficient time to submit another media. However, the EOI response will have all the necessary information in terms of timings, log files submitted etc.	To avoid any such situation OEM are advised to take appropriate steps. In case of corruption of the media, MoES will request OEM to re-submit the data within 3 days. However the data should be as per the log files submitted.
6	Page 18 - point # 9.3	Last Date of EOI submission - 3rd Aug @ 12:00 hrs	There are 10 mandatory benchmarks and one optional benchmark. Apart from these there is a huge size of input data which needs to be downloaded from MoES FTP site. We request MoES to extend the deadline by at least 4 weeks to complete the benchmarks and submit the EOI response.	Last date of submission of EOI responses is extended upto 12.08.2021 up to 12:00 hrs
<b>Benchmark Related</b>				

1	Page 12 - Step 3	It is mandatory to run and submit results (output files, logs, modified source code) for all the benchmark programs mentioned in section 5 failing which bidder will be disqualified.	We request MOES to provide an FTP site to upload output logs and other text materials. Full output files (binary data) will have to be shipped on physical drives and it will not be possible to ensure they arrive at the same time as the EOI response, given the tight time frames and possible length of time for shipping. Apart from this there is always a chance of media corruption. However, it would be possible to upload log files by the deadline so MOES can review timing information and other logs.	All output data files are not required. We have provided the limited output files of the benchmark applications at ftp site and also added scripts to evaluate the performance.
2	Page 12 - Step 3	Output files	Kindly allow us to submit final output data only. The intermediate data shall increase the size of data to be submitted.	As above
3	Page 11 - WRF	WRF version	The RFP asks for using WRF 4.2.2 version. Can we use WRF 3.8.1 for GPU specific benchmarks ?	OEMs are free to submit additional inputs. However the mandatory benchmarks should be of the same version as listed in EOI
4	Page 10 - Benchmark Tests		Can we use different dependency libraries version apart from those mentioned in README ?	Yes, allowed. However the accuracy of the final outputs should be within the prescribed limits.
5	Page 10 - Benchmark Tests		For calculating RMSE, which output files would be required for ROMS, WRF and Weather_Bench? Or entire output directory would be required?	Further details are provided at ftp
6	Page 10 - Benchmark Tests		For checking RMSE, would MoES be providing verification scripts or advising tools for calculating RMSE?	Further details are provided at ftp
7	Page 10 - Benchmark Tests		We see output verification details only for ROMS, DNS, WRF and Weather_Bench in their respective readme files. Would output verification be needed for other benchmarks as well? If yes, could MoES provide the details.	Further details are provided at ftp
8	Page 10 - Benchmark System Size	The minimum size of the benchmarking system should be 1 Peta flops	What is the recommended size of the system to be used for accelerator enabled application benchmark Weather_Bench?	Size of accelerator system can be decided by OEM. However, the system size should not be smaller than the system used by MoES.

M/s. IBM		
Sr. No.	Query / Clarification Sought	Reply / Remarks
1	1) We understand IITM did purchase a archival system based on HPSS. Would there be a need for integration of the proposed storage system and PFS with the existing HPSS at IITM and NCMRWF	Details will be provided in RFP
2	2) Is there a need to propose different types of drive tiers and tape archival system for the storage for the new HPC system	Yes, details will be provided at RFP stage

M/s. INTEL				
Sr. No.	Section No	Current ask in EOI	Clarifications sought	Reply / Remarks
1		The benchmarks should be run by the OEM only who is responding to this EOI. Benchmark submitted by any third party will not be accepted.		
			Can OEM use the third party infra?	Yes, provided the system being proposed largely of the same configuration. However, at the RFP stage the system needs to be same as proposed. However, projections to the next generations processors can be estimated.
2		The minimum size of the benchmarking system should be 1 Peta flops.	If cluster size and infra of 1PF is not available, what needs to be done. Is the benchmark run on lesser available size acceptable?	The minimum size of the benchmarking system should be 500 Tera Flops.
3	Section 5.0: Benchmarks		Can the benchmarks be run on present generation and share estimates on next gen CPU.	Yes
	<b>Additional request</b>			
4		The benchmarking may require additional clarifications and queries. Request IITM to facilitate the technical clarifications and queries throughout the EOI phase.		Queries on b/m can be addressed till seven days before the submission of bid. There cannot be another pre-bid

5	Request for 4 weeks extension as these benchmarks take time and efforts to run multiple times to optimize.	Last date of submission of EOI responses is extended upto 12.08.2021 up to 12:00 hrs
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M/s. NEC		
Sr. No.	Query / Clarification Sought	Reply / Remarks
1	1) For WRF, there exists a source code for WRF v4.2.2, while the README contains description for WRFV3. Should we proceed with WRFv4.2.2 or WRFV3 as per the README.	WRF v4.2.2
2	2) For DNS data size is 5.5TB number of nodes required 683 and cores 24588. So as to execute this Benchmark bidder need to run this model on at-least 2PFlops of system which is a very unlikely possibility. Hence we would request you to please provide a smaller dataset for current benchmark exercise.	a) This DNS code takes approximate 825 TF on Intel Xeon Broadwell (2.1GHz) processor. It is expected that it may take less computational amount if latest processors are used. b) The size of 5.5 TB is output generated by the code. There is no input data required for this model.
3	3) We would request IITM to provide smaller resolution data-sets for all applications. If possible we would request for providing steps to break down the data-sets (temporal/spacial reduction) for smaller executions.	As per EOI, no change
4	4) Is the weather_bench code intended to run over GPUs only, or other accelerators can compete in terms of performance? Is there a predetermined percentage of the total solution's compute dedicated to accelerators?	Any processor can compete. If code level changes are required the OEM needs to implement them and demonstrate to MoES
5	5) For weather_bench can you please share version details for Python and Required libraries: numpy, matplotlib, xarray, TensorFlow, tensorflow.keras, seaborn, pickle, collections import OrderedDict, glob, src.score and DLWP	For the python version and libraries, the information can be found in the README provided.
6	6) For the benchmark requirement; "The minimum size of the benchmarking system should be 1 Peta flops", We would request to reduce this criteria from 1 peta flop.	The minimum size of the benchmarking system should be 500 Tera Flops.

M/s. Niyura Technologies Pvt. Ltd., Mumbai			
Sr. No.	Query / Clarification Sought		Reply / Remarks
1	4.0 Pre-qualification criteria for Participation	Companies registered under MSME and Start-up India shall be exempted from past performance criteria mentioned in the tender. As per DPIIT scheme Start-ups are exempted selection criteria such as Prior Experience, Prior Turnover and Earnest Money Deposits.	Yes.Rule 173 (i) of the GFRs exempts the startup from Prior Experience and Prior Turnover requirements for DPIIT Recognized Startups subject to meeting of quality & technical specifications and making suitable provisions in the bidding document.