Nurturing Minds For a Better World



Pre-bid Meeting (ONLINE Mode) held on 09-10-2023 at 1430 hours Tender No.: TENDER/2023-24/110 dated 03-10-2023 QUERIES AND CLARIFICATIONS

SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF HIGH PERFORMANCE COMPUTING FACILITY

The Committee comprising of the following participated in the Online Meeting held on 09-10-2023 at 1430 hours:

- 1. Dr. Vishwas V, Assistant Professor, Department of Physics
- 2. Dr. Padmesh A, Associate Professor, Department of Chemistry
- 3. Dr. Arvind Ajoy, Associate Professor, Department of Electrical Engineering
- 4. Dr. Sandeep Chandran, Assistant Professor, Dept. of Computer Science and Engineering
- 5. Dr. Narayanan C Krishnan, Associate Professor, Department of Data Science
- 6. Shri K.V. Biju, Technical Officer
- 7. Shri Shanmugam V, Asst. Registrar (F&A)
- 8. Ms. Thasnin Harish C M, Assistant Registrar (Stores and Purchase)

The following members from the Centre for Development of Advanced Computing (C-DAC) participated in the meeting as special invitees.

- 1. Mr. Shailesh Andhare
- 2. Mr. Chitranjan Singh
- 3. Mr. Prasad Wadlakondawar

The following member of the Committee could not participate in the Meeting due to pre-occupation:

1. Dr. Piyush P Kurur, Associate Professor, Department of Computer Science and Engineering

Table-A indicates the Authorized Representatives of the firms participated in the Pre-bid Meeting.

Table-A

S. No.	Name of the Firm	Name of the Authorized Representative(s)
1.	M/s. Hewlett Packard Enterprise India Pvt Ltd, Kerala.	 Mr. Venugopal K G Email: <u>venugopal.k-g@hpe.com</u> Mobile No:- +91-9446546283 Mr. Bibhu Dash Mr. Rohit Sharma
2.	M/s. StarOne IT Solutions India Pvt. Ltd, Thiruvananthapuram	Mr. Thomas P. Ipe Email:- charles.eapen@staroneit.com Mobile No:- +91 974 639 3886



3.	M/s. SS Information System Pvt. Ltd., Chennai.	1. Ms. Ramya Kesavan Email: ramya@ssinformation.in Mobile No:- +91-9345944182 2. Mr. Mangalapandi P Email: mangalapandi@ssinformation.in 3. Mr. Natarajan Rajkumar
4.	M/s. Schneider Electric, Haryana.	Mr. Rajib Sonar Email: <u>Rajib.Sonar@se.com</u> Mobile: +91-9007037351
5.	M/s. Dhananjay Industrial Engineer Private Limited, Mumbai	Mr. Keyur Shah Email: keyur@wqindia.com Mobile: +91-7588403479
6.	M/s. Comtech Systems	Mr. Abhijith B Email: abhijith.b@comtechsystems.in
7.	M/s. Netweb Technologies India Ltd	Mr. Sukant Pradhan Email: sukant.pradhan@netwebindia.com
8.	M/s. Vertiv Energy Private Limited, Telangana	Mr. Manish Modi Email: Manishkumar.Modi@vertiv.com Mobile: +91 7304480797
9.	M/s. Technoline Systems and Services,	Ms. Limina Joshy Mr. Nikhil Madassery
10.	M/s. Micropoint Computers Pvt. Ltd., Mumbai	 Ms. Riddhi Baing Email: riddhi.baing@mpcl.in Mr. Umesh Godse Email: umesh@mpcl.in Mr. Amul Email: amul@mpcl.in Mr. Ajay Email: ajay@mpcl.in
11.	M/s. Locuz Enterprise Solutions Ltd	Mr. Kandaswamy C Email: kandaswamy.c@locuz.com Mr. Anantha Padmanabhan R Email: Anantha.Padmanabhan@locuz.com

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Table-B indicates the Queries raised and Clarifications provided.

Table-B

Sl. No.	Clause Reference	Query from Bidder	IITPKD Response
1	We hereby confirm and declare that we are not blacklisted/ De-registered / debarred by any Government department/ Public Sector Undertaking/ Private Sector/ or any other agency for which we have Executed/ Undertaken the works/Services	Kindly relax this clause Or Amend the clause as the bidder has not Blacklisted by the Central Government, State Government, or Government of Corporations in India in the last Three years.	No changes to the original clause
2	The bidder must have successfully installed at least THREE HPC cluster Systems (having combination of CPU Nodes, GPU nodes and Storage with nodes connected over Infiniband network) in last FIVE years in any State/Central Government Academic/R&D/CFTI institutions.	Kindly Amend the clause bidder should have successfully complete Work HPC Cluster system with CPU Node in last FIVE years in any State/Central Government Academic/R&D/CFTI institutions.	The bidder must have successfully installed at least three HPC clusters in last seven years. Please refer corrigendum to be published soon for further details.
3	Supply & Installation Period (Nvidia H100 GPU Card)	Kindly Amend the clause as 14-16 Weeks from the date of delivery of material at IIT Palakkad Premises	Please refer corrigendum to be published soon for further details.



4	"Processor- c. Specrate2017_fp_base >= 320 d. Specrate2017_int_base >= 330"	For Head Nodes, CPU Nodes and GPU Nodes, we request C-DAC to remove the benchmark submission requirement for SPEC2017 and allow us to submit online published numbers for the proposed CPUs. The server models may vary and may not be identical.	Please refer corrigendum to be published soon for further details.
5	Should have implemented at least THREE ORDERS of High Performance Computing Facility during previous five financial years (2018-19, 2019-20, 2020-2021, 2021-22, 2022-23) from Centrally Funded Technical Institutes (IITs, NITs, IISc, IISER), DRDO, ISRO, CSIR labs or Government Firms in India. Copies of the most recent purchase orders and user certificates of successful implementation must be included. Copies of financial statements or evidence of turnover must be furnished	Facility during previous Seven financial years (2016-17,2017-18,2018-19, 2019-20, 2020-2021, 2021-22, 2022-23) from Centrally Funded Technical Institutes (IITs, NITs, IISc, IISER), DRDO, ISRO, CSIR labs or Government Firms in India. Copies of the most recent purchase orders and user certificates of successful implementation must be	The bidder must have successfully installed at least three HPC clusters in last seven years. Please refer corrigendum to be published soon for further details.
6	The bidder shall furnish EMD of Rs. 30,00,000/- (Rupees Thirty Lakh Only) through online payment gateway in the E-Wizard	Please confirm whether EMD is exempted with NSIC /MSMSE certificate attached for ready reference	Firms registered with MSME/NSIC and holding valid certificates are exempt from EMD payment.



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7	The Supplier shall supply the equipment/items within the period specified in the tender document i.e. within 20 WEEKS of signing the purchase order or within the period mutually agreed between IITPKD and supplier. All the equipment and accessories should be delivered at IIT Palakkad Nila Campus, Kanjikode West, Palakkad - 678623, Kerala.	The Supplier shall supply the equipment/items within the period specified in the tender document i.e. within 40 WEEKS of signing the purchase order or within the period mutually agreed between IITPKD and supplier. All the equipment and accessories should be delivered at IIT Palakkad Nila Campus, Kanjikode West, Palakkad - 678623, Kerala.	Please refer corrigendum to be published soon for further details.
8	The Supplier shall thereafter proceed with the installation, commissioning, integration and validation and demonstrate operational acceptance of the equipment/items within the period specified. The equipment/items shall be installed and commissioned by the successful bidder within 20 to 25 days from the date of its receipt.	The Supplier shall thereafter proceed with the installation, commissioning, integration and validation and demonstrate operational acceptance of the equipment/items within the period specified. The equipment/items shall be installed and commissioned by the successful bidder within 60 days from the date of its receipt.	Please refer corrigendum to be published soon for further details.
9	The bidder must have successfully installed at least THREE HPC cluster systems (having combination of CPU Nodes, GPU nodes and Storage with nodes connected over Infiniband network) in last FIVE years in any State/Central Government Academic/R&D/CFTI institutions.	The bidder must have successfully installed at least THREE HPC cluster systems (having combination of CPU Nodes, GPU nodes and Storage with nodes connected over Infiniband network) in last SEVEN years in any State/Central Government Academic/R&D/CFTI institutions.	The bidder must have successfully installed at least three HPC clusters in last seven years. Please refer corrigendum to be published soon for further details.
10	The peak compute power of each such HPC cluster must be at least 150TF	The peak compute power of one such HPC cluster must be at least 150TF	Please refer corrigendum to be published soon for further details.



11	a. latest generation processor b. Minimum 24 cores per processor with Minimum clock frequency of CPU 2.4 GHz.	a. 3rd or latest generation processorb. Minimum 24 cores per processor with Minimum clock frequency of CPU 2.4 GHz.	Please refer corrigendum to be published soon for further details.
12	Power Supply: Redundant and Hot Pluggable, 80 Plus Platinum or better certified power supply along with IEC 14 type Power cables	Power Supply: Redundant and Hot Pluggable, 80 Plus Platinum or better certified power supply along with IEC 14 / IEC19 type Power cables	Please refer corrigendum to be published soon for further details.
13	The system must be specifically designed to provide enterprise NAS functionality (No ad-hoc configuration using off-the-shelf components).	The system must be specifically designed to provide enterprise NAS functionality (No ad-hoe configuration using off-the-shelf components).	Please refer corrigendum to be published soon for further details.
14	Racks & enclosures with PDU -"Best in class IT Rack with containment, High density with 42U as standard, complete with shelf, cable manager & blanking panels with PDU. Each Rack frame should be 42 U 19" mounting type with minimum 2000 mm (Height) x 800 mm (Width) x 1800 mm (Depth). Rack design should be sturdy frame section; corners stiffened with welded MS die cast. Rack to be provided with all basic accessories like, blanking panels, baying kit, sliding keyboard tray, vertical cable manager as well as horizontal cable manager, earthing copper strip with insulators, PDU 32 amp vertical mounting with IEC type socket with 12 nos of IEC C13 Sockets & 4 nos IEC C19 Socket with 2.5 mtr power chord with 32A MCB. Each rack shall have minimum two such PDU's."	Please accept to change as "Rack design should be sturdy frame section; corners stiffened with welded MS die cast / sturdy Extruded Aluminium Frame Section."	SUITABLE CORRIGENDUM SHALL BE PUBLISHED SOON



15	'U' Usable Space: Minimum 'U' space to be available to mount IT equipment's should be 84U for set of 2 Rack Integrated DC	Please accept to change the claose as Minimum 'U' space to be available to mount IT equipment's should be 82U for set of 2 Rack Integrated DC as 2U sapce required for Environmental and DCIM server mounting	SUITABLE CORRIGENDUM SHALL BE PUBLISHED SOON
16	Out Door Unit: Copper piping with insulation tube of elastomeric, nitrile foam between each sets of outdoor & indoor unit as per specification. Piping to be properly supported by MS clamp. All transmission wiring between indoor to outdoor unit is kept in PVC conduit.	Request you to add Inverter/Variable capacity Compressor should be in Outdoor unit to restrict technicain involvment in HPC area during maitanance, also the Cooling Unit should be UL certified.	SUITABLE CORRIGENDUM SHALL BE PUBLISHED SOON
17	Pls add	Eletrical panel, Hvac,UPS,Rack, iPDU from same oem for better service avialablity	SUITABLE CORRIGENDUM SHALL BE PUBLISHED SOON
18	Certification	Pls add ISO 50001	No Change to original clause
19	Integrated Infrastructure Solution: Smart/Modular compact 'Plug-n-Play' intelligent integrated data center infrastructure to deploy and effectively manageable IT Infrastructure.	WQ smart systems are usually integrated at customer site location and brought in SKD FORMAT. This helps as usually customer premises are ready and has challenges to mobilise assembled racks due to entry constraints etc.	SUITABLE CORRIGENDUM SHALL BE PUBLISHED SOON



20	Main Electrical Panel & Cabling: DB panel to be mounted in the Utility cabinet along with all internally integrated cabling. Adequate precaution and compliances to be taken care for sizing/ratings of cables and switchgear, DB inside the integrated DC rack solution. IIT Palakkad shall provide Main Raw Power and UPS power at data center room with appropriate size of dedicated earthing at site.	Customer to specify the raw power capacity as whether it is 63 amps etc , this helps to work on the power distribution for cooling and UPS . POD is usually mounted on the utility panel and customer to specify as whether utility panels are required in addition to 2 smart racks.	SUITABLE CORRIGENDUM SHALL BE PUBLISHED SOON
21	Cooling System: Each Cooling unit should have capacity of 20 kW. The unit shall be configured to provide air flow/pattern to provide uniform airflow over the entire height of the rack. EC fan /variable speed should be used for maximum efficiency and minimum power cost. A variable capacity compressor /inverter compressor, which permits stepless adaptation of the output in partial-load operation. Cooling system should come with monitoring and control panel. Compressor must be electrically protected through the adequate protection devices. Total CFM (cubic feet per minute) of each unit should be adequate to maintain the rack temperature. Supply cooling temperature to be maintained at 22°C or lower with an accuracy of ±1°C at site ambient conditions of 40 Deg. C. All units should work in tandem operation in order to share the heat load equally. (The units should work in redundant mode or in extended capacity).	Customer to specify as whether the server room is equipped with fake flooring and false ceiling. Cooling units low side pipings and cables to be routed hence this arrangement will be required. Else appropriate closed platforms to be provided to cover the same.	SUITABLE CORRIGENDUM SHALL BE PUBLISHED SOON



22	Out Door Unit: Copper piping with insulation tube of elastomeric, nitrile foam between each sets of outdoor & indoor unit as per specification. Piping to be properly supported by MS clamp. All transmission wiring between indoor to outdoor unit is kept in PVC conduit.	Customer to specify the approximate distance of ODU to IDU in metres and also whether foundation is available for mounting ODU.	SUITABLE CORRIGENDUM SHALL BE PUBLISHED SOON
23	U' Usable Space: Minimum 'U' space to be available to mount IT equipment's should be 84U for set of 2 Rack Integrated DC	RMU device and Fire units occupies U space, as per specifications customer needs 84u complete usable from 2 racks. Customer to suggest if these units can be placed in the utility racks	SUITABLE CORRIGENDUM SHALL BE PUBLISHED SOON
24	Racks & enclosures with PDU: Best in class IT Rack with containment, High density with 42U as standard, complete with shelf, cable manager & blanking panels with PDU. Each Rack frame should be 42 U 19" mounting type with minimum 2000 mm (Height) x 800 mm (Width) x 1800 mm (Depth). Rack design should be sturdy frame section; corners stiffened with welded MS die cast. Rack to be provided with all basic accessories like, blanking panels, baying kit, sliding keyboard tray, vertical cable manager as well as horizontal cable manager, earthing copper strip with insulators, PDU 32 amp vertical mounting with IEC type socket with 12 nos of IEC C13 Sockets & 4 nos IEC C19 Socket with 32A MCB. Each rack shall have minimum two such PDU's.	It is recommended to use 3p PDU'S as we understand the heat load is 10kw per rack and assuming the POWER LOAD will be above 7.3kva. Customer to suggest on the same and it is suggested to use maximum no of sockets (36) (6) of c13 & c19 considering future expansions.	SUITABLE CORRIGENDUM SHALL BE PUBLISHED SOON



25	DOCUMENTS COMPRISING THE BID: Original catalogue (not any photocopy) of the quoted model duly signed by the principals must accompany the quotation in the technical bid	Need Clarity.	PDF SOFTCOPIES ALONG WITH THE BID SHOULD BE SUFFICIENT
26	DOCUMENTS COMPRISING THE BID: Compliance or Confirmation report with reference to the specifications and other terms and conditions should also be obtained from the principal	Need Clarity.	PDF SOFTCOPIES ALONG WITH THE BID SHOULD BE SUFFICIENT
27	DOCUMENTS COMPRISING THE BID: "(h) Bidders who are bidding for this tender, 1) Should have implemented at least THREE ORDERS of High- Performance Computing Facility during previous five financial years (2018-19, 2019-20, 2020-2021, 2021-22, 2022-23) from Centrally Funded Technical Institutes (IITs, NITs, IISc, IISER), DRDO, ISRO, CSIR labs or Government Firms in India. Copies of the most recent purchase orders and user certificates of successful implementation must be included. Copies of financial statements or evidence of turnover must be furnished	Request you to change to at least ONE Order of High-Performance computing facility from any Government or Private Sector.	The bidder must have successfully installed at least three HPC clusters in last seven years. Please refer corrigendum to be published soon for further details.



28	EARNEST MONEY DEPOSIT (EMD): "The bidder shall furnish EMD of Rs. 30,00,000/- (Rupees Thirty Lakh Only) through online payment gateway in the E-Wizard."	Please include MSMEs Exceptions.	Firms registered with MSME/NSIC and holding valid certificates are exempt from EMD payment.
29	PERIOD OF VALIDITY OF BIDS: Bids shall remain valid for a period of 180 DAYS after the date of the deadline for submission of bids prescribed by IITPKD. (e) If the deadline is extended due to unforeseen circumstances, the bid validity shall be deemed to have extended accordingly.	Please make BID validity to 60 days Max.	NO CHANG IN BID VALIDITY PERIOD
30		Weather consortium is permitted.	Please refer to Serial No. 1 in our tender terms and conditions under the heading "General (c)." : Each bidder shall submit only one bid, either by himself or as a partner in a joint venture or as a member of the consortium. If a bidder or if any of the partners in a joint venture or any one of the members of the consortium participate in more than one bid, the bids (of both the individual and the partnership/consortium/joint venture) are liable to be rejected.



31		Is 'Make in India' Mandatory?	As already mentioned in our tender document, the bidder should be a Class-I / Class-II Local Supplier meeting the requirement of a minimum of 20% Local Content in line with the Public Procurement (Preference to Make in India) Order 2017 No. P-45021/2/2017-PP(BE-II) dated 16-09-2020. Bidders other than Class-I / Class-II Local Suppliers, who may participate in this tender, may be doing so at their own risk. Such bids would not be considered and rejected outright.
32	Pre-Bid Meeting: Online Pre-Bid meeting will be held on 09-10-2023 at 02:30 PM to clear the doubts of intending bidders.	Request you to provide the Meeting Link Credentials to attend the Prebid Meeting	
33	TIME FOR SUPPLY, INSTALLATION, COMMISSIONING: The Supplier shall supply the equipment/items within the period specified in the tender document i.e. within 20 WEEKS of signing the purchase order or within the period mutually agreed between IITPKD and supplier"	We request to allow for 64-72 weeks for the Delivery of the materials	WE MAY EXTEND DELIVERY PERIOD FOR ENTIRE SOLUTION UPTO 30 WEEKS INSTEAD OF 20 WEEK PUBLISHED IN THE TENDER



34	RAM: In Master Node, CPU only compute Nodes, High Memory CPU Only Compute Node, GPU Node with NVIDIA H100 GPU & GPU Ready Node - You have deisred that "DDR4 memory to be configured in Balanced Configuration"	We have two queries regarding the same i) Since you have asked for latest processor and latest processors from both Intel and AMD are based on DDR5 memory, we request you to change it to DDR5	
		ii) Kindly clarify if the term "balanced" means similar memory configuration for both processors OR it means optimized configuration which has not only similar memory configuration for both processors but also has 1 DIMM per channel.	Please refer corrigendum to be published soon for further details.
35	Processor: "In Master Node, CPU only compute Nodes, High Memory CPU Only Compute Node, GPU Node with NVIDIA H100 GPU & GPU Ready Node - You have deisred that ""SPEC benchmark report for the offered modelwith the same configuration as required must be submitted with the bid"	We request you to extend the due date of the tender ate least for 30 days from the date of relase of the corrigendum	PUBLICALLY AVAILABLE SPEC BENCHMARKS FOR THE QUOTED CPU SKU SHALL BE ACCEPTED.



36	100TiB NAS based Backup Storage: You have asked for Backup server with Backup software including license for all servers.	We requet the following information i) Please define "all-servers" clearly because we need to provision the number of licenses and make provision for 10G port on the same	
		ii) Without any backup policy defined and without knowing the servers to be backed up, it is not possible for us to compute the storage capacity of this backup server	Please refer corrigendum to be published soon for further details.
37	Scale and Density of Integrated Data Center: For 40 KW IT load, 2 X 20 KW DX based closed loop cooling solution. (The units should working redundant mode or in extended capacity	Please clarify 20 KW capacity in (N+N) redundant and 40KW in Capacity mode?	Please refer corrigendum to be published soon for further details.
38	SCOPE OF WORK: Cluster shall be installed with C-DAC HPC Software Stack.	Request you to put more light into the same.	We will employ the C-DAC HPC software stack for constructing the HPC Cluster.
39	Scale and Density of Integrated Data Center	Pl clarify total IT load. As 2x20 KW will work as capacity. Du IITPKD need (N+1) redundant?	SUITABLE CORRIGENDUM SHALL BE PUBLISHED SOON
40	Out Door Unit	As per weather condition PVC conduit's life will not be more hence Pl change the clause as: All Transmission wires between Indoor to outdoor should be PVC Insulated Cables. It should be inside Cable tray along with Cupper Piping	SUITABLE CORRIGENDUM SHALL BE PUBLISHED SOON



41	Remote Monitoring	Pl Change HMI as minimum 7" or more	SUITABLE CORRIGENDUM SHALL BE PUBLISHED SOON
42	Integrated Fire Security & Suppression System	for unlikely accident we recommend the point as: OU Rack based active fire common fire supersession to be placed inside utility cabinet for protecting Electrical DB panel and to maximise IT U space	SUITABLE CORRIGENDUM SHALL BE PUBLISHED SOON
43	Additional Point for better serviceability and as per GoI recommendation on MII	The Smart rack OEM should have manufacturing and testing facility in India for offered capacity rack and cooling unit. The smart Rack OEM should provide undertaking for confirming on the same.	SUITABLE CORRIGENDUM SHALL BE PUBLISHED SOON
44	3. The bidder must have successfully installed at least THREE HPC cluster systems (having combination of CPU Nodes, GPU nodes and Storage with nodes connected over Infiniband network) in last FIVE years in any State/Central Government Academic/R&D/CFTI institutions.	we hereby request to modify the clause to " The bidder/OEM must have successfully installed at least THREE HPC cluster systems (having combination of CPU Nodes, GPU nodes and Storage with nodes connected over Infiniband network) in last FIVE years in any State/Central Government Academic/R&D/CFTI institutions."	BIDDER EXPERIENCE IS REQUIRED. PO TO BE IN THE NAME OF THE BIDDER.
45	5. Copies of purchase order and installation report in the name of the BIDDER must be submitted with the bid.	we hereby request to modify the clause to "Copies of purchase order and installation report in the name of the BIDDER / OEM must be submitted with the bid."	BIDDER EXPERIENCE IS REQUIRED. PO TO BE IN THE NAME OF THE BIDDER.



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46	7. Entire HPC & Storage solution should fit in 2 IDC racks quoted by the bidder.	we hereby request to modify the clause to "Entire HPC & Storage solution should fit in 3 IDC racks quoted by the bidder."	Please refer corrigendum to be published soon for further details.
47	Each Rack frame should be 42 U 19" mounting type with minimum 2000 mm (Height) x 800 mm (Width) x 1800 mm (Depth)	we hereby request to modify the clause to " Each Rack frame should be 42 U 19" mounting type with minimum 2000 mm (Height) x 800 mm (Width) x 1000 mm (Depth)"	Please refer corrigendum to be published soon for further details.
48		With reference to the subjected tender number. TENDER/2023-24/110 we like to inform you that we are looking forward to participate in this tender. However as per Tender Prequalification you asked for last Five years' experience where as we request considering COVID- 19 Two years business impact please grant relaxation for total last Seven (7) years. Hence, we kindly request to amend in Pre-Qualification criteria as below so that we can submit the bid against the RFP. The bidder must have successfully installed at least THREE HPC cluster systems (having combination of CPU Nodes, GPU nodes and Storage with nodes connected over InfiniBand network) in last minimum SEVEN / EIGHT years in any State/Central Government Academic/R&D/CFTI	The bidder must have successfully installed at least three HPC clusters in last seven years. Please refer corrigendum to be published soon for further details.

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institutions. With The peak compute	
power of each such HPC cluster must be at least 150TF.	

All other Terms and Conditions of the Tender remains unchanged.

REGISTRAR IIT PALAKKAD