

INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE

2A & 2B , Raja S.C. Mullick Road, Jadavpur, Kolkata-700032

NIT No. : IACS/SCS/AD/2019-20/14

Date: 02/05/2019

Sealed tender in two bids system (technical bid and price bid) is invited from bonafide, resourceful and eligible manufacturer/exclusive distributor/vendors for **HPC Computer Cluster**

Part-I (Technical Bid) of the tender should contain technical specifications in detail as well as commercial terms and conditions. Part-II (Price Bid) should clearly indicate group-wise price, if needed, as mentioned in the technical bid. The Technical Bid and Price Bid are to be submitted in separately sealed envelopes, distinctly marked accordingly and both to be put inside another envelop, that should be sealed and superscribed with tender notice no. and due date. The bidders may submit bids duly signed in their own letterheads.

Completed tender bids should reach the office of the **Registrar, Indian Association for the Cultivation of Science (IACS), 2A & 2B Raja S. C. Mullick Road, Jadavpur, Kolkata-700032** on or before the scheduled date and time specified below:

Tender Notice No.	NIT No. IACS/SCS/AD/2019-20/14 Date: 02-05-19
Last date and time of submitting tender	28 May, 2019 latest by 12.00 noon
Pre-bid meeting(date, time & place) to discuss technical specification	24 May, 2019 at 3.00 PM
Date and time of opening tender (Technical Bids)	28 May, 2019 at 3.00 PM
Place of opening tender	Raichoudhuri Hall
Date and time of opening of Price Bid	The Price Bids of the bidders qualifying the technical bid will only be opened, the date of which will be intimated to the short-listed bidders at their email addresses. The rest of the bids will be rejected.
Contact	Email: spad@iacs.res.in Tel.+91 33 2473 4971 [Ext. 2105]

The technical bids will be opened first to judge/evaluate the technical specifications of the said instrument and thereafter the price bids of only technically qualified bidders will be opened.

Technical Bid Evaluation: The Technical Bids will be evaluated in the presence of the representatives of intending bidders who will be able to clarify technical aspects of their bids, if any, required by the Technical Evaluation Team.

Opening of price-bid: The Price Bids of the bidders qualifying the technical bid will only be opened, the date of which will be intimated to the short-listed bidders at their email addresses. The rest of the bids will be rejected.

Please note that IACS will not provide any accommodation or reimburse any expenses to any of the bidders for attending opening of technical bid.

Quotations received incomplete or beyond the stipulated time will be summarily rejected.

Bidders should submit their past experience for supplying and successful installation of similar units to other research Institutes/Universities/other organizations in India and abroad. Please provide documentary proofs of such successful installation and supportive documents that the instruments are running successfully.

1. TECHNICAL BID

The technical bid should contain technical specifications and should be kept in a separate sealed envelope duly superscribed as 'TECHNICAL BID' on the outer cover of the envelope as already detailed above. **It should be clearly mentioned on the envelope as "Technical Specification for HPC Cluster".**

The Technical Specifications acceptable for the '**Computer Cluster**' are as follows:-

(a) 1 Master Node with following specifications

Processor	2 x Intel® Xeon® CLX-SP 4214 12C/24T 2.2G 16.5M 9.6GT 2UPI
Chipset	Intel® C621 chipset or better
Memory	128 GB DDR4-2666 ECC RDIMM Up to 2TB ECC 3DS LRDIMM
Storage	2 x 960GB SATA SSD for OS 4 x 6 TB Ent SATA HDD for Storage
Raid Controller	Hardware Raid Controller 12Gb/s per port- Gen-3,RAID 0,1,10,5,6,50,60.
HDD Bays	Min 8x 3.5" Hot-swap SAS/SATA HDD bays
Interconnect	Gigabit Ethernet with suitable cable(s), & Mellanox® ConnectX-4 VPI EDR controller with Single QSFP28 port and speed up to 100Gbps with Cable
Chassis	2U Rack Mountable chassis with sliding railkits.
Graphics	Integrated
Exp Slots	5 PCI-E 3.0 slots
Management	1 x Dedicated IPMI
P. Supply	Redundant Power Supplies Platinum Level
OS	CentOS Enterprise Linux
Warranty	3 years Comprehensive on-site warranty (NBD) on Hardware

(b) 8 Compute Node with following specifications

Processor	2 x Intel® Xeon®CLX-SP 4214 12C/24T 2.2G 16.5M 9.6GT 2UPI
Memory	128 GB DDR4-2666 ECC RDIMM Max Up to 2TB ECC 3DS LRDIMM, DDR4-2666MHz; 16 DIMM slots"
Storage	1 x 960 GB SATA SSD for OS
Storage Controller	SATA 2.0 & 3.0 with RAID 0, 1,5, 10 Support, 3x Hot-swap SATA Drive Bays.

Connectivity Gigabit Ethernet with suitable cable(s), & Mellanox® ConnectX-4 VPI EDR controller with Single QSFP28 port and speed up to 100Gbps with Cable

Chassis As Per OEM

Graphics Integrated

Expansion Slot 1 PCI 3.0

Management 1 x Dedicated IPMI 2.0 LAN

P. Supply "Redundant Power Supplies Platinum Level 2200W Redundant Power Supplies, Titanium Level (96%)

OS CentOS Enterprise Linux

Warranty 3 years Comprehensive on-site warranty (NBD) on Hardware

(c) Gigabit Switch 1 x 24-Port Gigabit Ethernet Switch

(d) Infini Band Switch Switch-IB(TM) 2 based EDR InfiniBand 1U Switch, 36 QSFP28 ports, 2 Power Supplies (AC), x86 dual core, standard depth, P2C airflow, Rail Kit, RoHS6

(e) UPS & Power APC UPS 10 KVA Online. Battery Bank with 1/2 Hr backup.

Power, Heat & Cooling: - . Power consumption and heat dissipation estimate for the total cluster should be mentioned clearly.^[1]_{SEP}

Warranty: - Three years on-site warranty for all components.

Servicing facility within India is a must while service engineer stationed at Kolkata will be preferred. A list of other places where the instrument has been installed should also be provided.

A compliance table (see below) must be prepared and submitted along with the technical bid.

Sr. No	Tender specification	Your offered instrument specification	Extent of compliance

Tender will not be accepted if the technical compliance chart is NOT provided following the above format.

2. PRICE BID

The financial bid indicating (item-wise) price for the item(s) mentioned in the technical bid should be kept in a separate sealed envelope duly super scribed as 'PRICE BID' on the outer cover of the envelop as already detailed above. Price bids of only technically qualified bidders will be opened and they will be intimated the date and time of the opening of price bid at their e-mail ids. Rest of the bidders will stand rejected.

PRICE: Price to be quoted on CIF Kolkata.

3. BID SECURITY:

An Account payee Demand Draft of any of the Commercial Banks for Rs. 70,000 (Rupees Seventy Thousand only) drawn in favour of “Indian Association for the Cultivation of Science (State Bank of India, Jadavpur University Branch, A/C No. 11079699211, IFSC: SBIN000093, MICR Code: 700002048)” is to be furnished by the bidders alongwith Technical Bid, except Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) or are registered with the Central Purchase Organisation or the concerned Ministry or Department.

Alternatively, the bidder shall have the option to furnish EMD in the form of Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee from any of the Commercial Banks. The Bid-Security should have at least 90 (ninety) days validity period beyond the final bid validity period.

In case of non-award of the work the Bid Security money would be returned to the unsuccessful Bidders.

4. PERFORMANCE SECURITY:

An Account Payee Demand Draft on any commercial bank of India or Bank Guarantee (BG) of any Commercial Bank preferably located at Kolkata of 10% of the order value in the name of “Indian Association for the Cultivation of Science” is to be furnished by the successful bidder as Performance security. Performance security money should remain valid for a period of 60 days beyond the date of completion of all contractual obligations of the supplier including warranty obligations. Bid security money or EMD will be refunded to successful bidder on receipt of the Performance security money.

5. TERMS OF PAYMENT :

Payment will be made through irrevocable Letter of Credit in two instalments. 90% of the money will be released on submission of shipping of documents. Remaining 10% will be released after successful installation of the instrument.

6. GENERAL INSTRUCTIONS :

1. Validity of tender: Tender submitted should remain valid for at least six months from the date of opening the tender. Validity beyond six months from the date of opening of the tender shall be lapsed by mutual consent.
2. The tender should accompany a compliance chart.
3. Incomplete and conditional tenders as well as tenders received after the due date will be summarily rejected without assigning any reasons thereof.
4. At any time prior to the bid due date, IACS may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder during pre-bid meeting, modify the bidding documents. The amendment(s) will be notified on the institute website. Prospective bidders are advised to occasionally visit the website (www.iacs.res.in/tender) for any amendment.
5. Installation/Demonstration/Application training at site: Installation & user training at IACS, free of cost by the supplier.
6. Service facility: In India, preferably Kolkata, supplier should mention their details of service setup and man powers who are responsible for after sales support. Response time should be within 24 hrs.
7. The model number, make and a printed literature of the product should be submitted positively.
8. Proposed delivery schedule should be mentioned clearly.

9. Manufacturers / exclusive distributors / vendors should have history of supplying this type of instruments to this or other scientific organizations. Availability of a list in this regard would be preferred.
10. Authorized dealership certificate should be provided in case of principal manufacturing company is not quoting directly.
11. Guarantee certificate, users manuals etc. are to be handed over to the user after successful commissioning of the system.
12. In the event of date being declared a closed holiday for purchaser's office, the due date for submission of bids and opening of the technical bids will be the following working day at the appointed time.
13. In case of any dispute, the decision of IACS authority shall be final and binding on the bidders.
14. In case of any litigation the matter will be dealt within the jurisdiction of the High Court of Calcutta only
15. For any clarification regarding technical specifications, information etc., please send your queries to Prof. Ayan Datta (spad@iacs.res.in).
16. The authority of IACS reserves the right to reject any or all of the tenders received without assigning any reason thereof.

Technical Instructions:

i) Vendor Eligibility: The bids must be submitted by OEMs or OEM supported single vendors only with original authorization certificates from the OEMs. Vendors should have proven experience in setting up a HPCC of minimum 100 TFLOPS in the last three years in India and a minimum of 3 installation of atleast 5 TFLOPS in Kolkata Region. A brief proof for such experience (copies of orders/installation certificate) should be included in the technical bid. All the three materials namely the Master, Compute nodes, interconnects and UPS have to be quoted by a single vendor. Part Quotation by a vendor is not admissible as future warranty and maintenance are difficult in the cases of fragment purchases. The OEM/OEM supported vendor should have their own service centre in Kolkata with technical knowhow to troubleshoot HPCC requirements. Sub – leasing of service/technical support by OEMs or OEM supported vendors is not admissible. The response time should not be more than 24 hours/next working day.

ii) Submitting Tender: The Tender must contain materials related to this specifications and should not contain materials that can overtly or covertly try to canvass for the vendor. The vendors are allowed to deviate from the specifications given below only when such deviations are demonstrated to be technically superior. Additional features in the quoted items which are better than those in the indent – may be highlighted. ^[1]~~[SEP]~~ The technical bid should not have any mention of pricing. The commercial bid should have the pricing for each option separately. Prices should be inclusive all charges (taxes/duties as applicable, shipping charges, delivery at site, installation etc.) with clearly indicated break- ups. Fax, e-mail Tender will not be accepted. Duplicate Bid document must be submitted in Separate closed cover. The vendors should quote CIF Kolkata for foreign make items.

iii) Installation and Commissioning: Free of cost at IACS, Kolkata. The vendors are required to give an estimate of the time required for installation, fine-tuning of the cluster and hand- holding/training of the principal users in the technical bid. The vendor shall be responsible for setting up of High Performance Linux Cluster using Enterprise Linux OS or equivalent (to be provided by vendor). It will be highly desirable if the vendor has proven capability to install some commonly used quantum chemistry programs like Gaussian, ADF, Gamess, Polyrate, NWChem, Molpro, DeMon2K, NAMD, VASP, Crystal 17, Quantum Espresso. Parallelized installation of quantum chemistry codes like Gaussian 09 TCP Linda is highly desirable.

iv) Training: Free training on operation, maintenance and troubleshooting of the whole HPCC Solution should be imparted to at least 2 persons for a period of two weeks at the site of installation.

(v) Compliance List: The vendor must submit a table indicating the compliance of the features of the model of the components being quoted with those given in the indent. In case of non-compliance against a particular item, the vendor should justify that.

(vi) Post-sale service: The vendor must submit the names of the service engineers employed by them who are competent to serve the HPCC installation along with their contact details in India.

vii) Tender updates: Prospective bidders may please refer to our website <http://www.iacs.res.in>, occasionally for any update on the tender which may appear from time to time either in respect of pre-bid meeting or otherwise.

Acting Registrar