



## UNIVERSITY OF ALLAHABAD

(A Central University established by an Act, 2005 of Parliament, Govt. of India)  
ALLAHABAD, UP, INDIA-211002

ENQUIRY FORM – OPEN TENDER

### **NOTICE FOR INVITING OPEN TENDER**

**Notice Inviting Tender/Bid No. :** UoA/Physics/FIST/HPC/Sci-Equip-1/2018 Date: 16.03.18.

#### **IMPORTANT DATES & TIME**

- **Last Date & Time for Submission** : 16.04.18 up to 1700 hrs (IST)
- **Date of opening of Technical bid** : 17.04.18 at 11.30 hrs (IST)
- **Indicative date of opening of Financial bid** : 18.04.18 at 14.00 hrs (IST)
- **Tender Processing Fee** : Rs. 1000/- (Rupees One Thousand only)

University of Allahabad invites the sealed quotation from reputed manufactures or authorized dealers for supply of "**High Performance Computer (HPC) system**" for department of Physics, University of Allahabad under FIST programme. Interested manufactures directly or through their authorized dealer are to quote & submit the quotation (In case of authorized dealer a valid authorization from manufacturer for bidder quoting in University of Allahabad is required, failing which quotation of the authorized dealer will not be entertained in any circumstances). Tender Document and Other details may be downloaded from the University website [www.allduniv.ac.in](http://www.allduniv.ac.in).

The tender document consists of two parts:

Part A: Technical Bid with terms and conditions.

Part B: Financial Bid

Detailed specifications and terms conditions are given in annexure – I to V

Bidders may submit the tender document in two separate sealed envelopes super scribed "Technical Bid" and "Financial Bid" respectively. The two sealed envelopes should reach the office of the Registrar, University of Allahabad, Allahabad on or before 16.04.18 upto 17.00 Hours, Technical Bid should accompany a DD / FDR amounting to Rs. 2,00,000.00 (Rupees Two Lakh only) as Earnest money deposit (EMD) payable to the **Finance officer, University of Allahabad**. **EMD** will be refunded to the unsuccessful bidders within 30 days of finalization of the tender. In case of successful bidders **EMD** may be adjusted against Security Deposit without **EMD** the technical-bid will not be considered.

Envelopes containing Technical Bid will be opened on 17.04.18 at 11.30 Hours. Only two representatives of the desired bidders may participate at the time of opening of Technical Bid.

Financial Bid of the technically qualified bidders may be opened on the indicative date or on a date to be intimated after the finalization of the technical bid.

(Prof. A. K. Rai)  
Head, Physics Department,  
University of Allahabad

## PART-‘A’

### Annexure – I

#### **Proforma for submitting the Technical Bid**

1. Name of the Bidder :
2. Postal Address :
3. Address of the factory Site :  
( if original manufacturer)
4. Telephone/Mobile No. :
5. Owner/Authorized representative's name, :  
address and phone number
6. Year from which the bidder is in this business :  
(Must have at least five years experience)
7. Turn over during last three years:
  - i. Financial Year .....-..... :
  - ii) Financial Year .....-..... :
  - iii) Financial Year .....-..... :

(Documentary evidence must be attached)
8. \* PAN Number :
9. \* TAN Number :
10. \* C.S.T. Number :
11. \* Sales Tax Number :
12. \* Service Tax Number :
13. Whether ISO certified (please give number) :
14. Whether DGSD registered :  
(submit documentary evidence)
15. Whether Registered with the University in past :  
(Give Details)

\* Copy must be enclosed for documentary evidence.

16. List of Government organizations to whom supplies: worth Rs. 200 lakh and more have been successfully made during last three years with certificates issued by the competent authority.
17. Name of the Bank of issue along with No. & Date : of the D.D. of Rs. ..../- as cost of tender document attached.
18. Name of the Bank of issue along with No. & Date : of the D.D./F.D.R. of Rs. .... as E.M.D. attached.
19. Whether the bidder has been black listed by any Government Organization.

### **Declaration**

I \_\_\_\_\_ hereby certify that information given above are true to the best of my knowledge, and, in any case/time, it is found to be incorrect, I will be debarred by the University.

Dated :

**Signature & Seal of the bidder**

## Supply of High Performance Computing at Allahabad University

### Specification – Master Node (Qty 1)

Sl. No	Technical Parameter	Technical Specification Required
1	No of Processor	2 processors, each processor having 10 cores (latest Processor)
2	Processor Speed	Base frequency 2.9GHz or higher
3	Threads	Server should be able to provide 160 threads
4	Memory (RAM)	256 GB DDR4 memory
5	L3 Cache Memory	Minimum Cache should be 8MB per core
6	Internal Hard Disk Capacity	2 x 2 TB for OS & 4 x 6TB for Data Disks with SAS interface with RAID 10 implemented on data disks
7	Bus technology	PCIe Gen3
8	I/O Slots	Total 5 PCIe hot plug Gen3 slots
9	High speed connectivity	56G or higher InfiniBand port
10	GPU support	System should support NVidia GPUs
11	Power supply	Redundant Hot Swappable power supply and Cooling fan/subsystems
12	Operating System	RHEL for HPC
13	Form factor/Node Type	2U 19- inch wide Rack Mountable with rail kit
14	Warranty	At least 3 years on site

### Specification - Compute Node (Qty -2)

Sl. No	Technical Parameter	Technical Specification Required
1	No of Processor	2 processors, each processor having 10 cores (latest Processor)
2	Processor Speed	Base frequency 2.9GHz or higher
3	Threads	Server should be able to provide 160 threads
4	Memory (RAM)	256 GB DDR4 memory
5	L3 Cache Memory	Minimum Cache should be 8MB per core
6	Internal Hard Disk Capacity	2 TB SATA Disks or higher
7	Bus technology	PCIe Gen3
8	I/O Slots	Total 5 PCIe hot plug Gen3 slots
9	Infiniband Port	56G or higher Infiniband port
10	GPU support	System should support NVidia GPUs
11	Power supply	Redundant Hot Swappable power supply and Cooling fan/subsystems
12	Operating System	RHEL for HPC
13	Form factor/Node Type	2U 19- inch wide Rack Mountable with rail kit


  
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14	Warranty	At least 3 years on site
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**Networking component**



1	Cluster high speed network 56Gbps or higher InfiniBand switch Between any two nodes full bandwidth needs to be realized (Ratio 1:1) Required InfiniBand cables to be provided	
2	24 ports Gigabit Ethernet Switch – 1 unit 1 Gbps Ethernet Switch auto sensing of link speed on all ports. Required cables to setup separate management network and node provisioning network Should support multiple VLAN	
3	Rack	42U server rack to house the system with required PDUs etc. 80% Perforated front and rear door for air flow. Empty rack slots should be filled with filler. PDU as required for complete setup.
4	Monitor, Keyboard and Mouse	17 Inch monitor, keyboard and mouse to be attached with Master Node.

**Software Components**

1	<b>Software Components</b>	
	Scheduler	Should provide job scheduler to manage the queue in the HPC environment.
	Compilers	GNU compilers (GCC & Gfortran), MPI Library, OpenMP, Processor Architecture based C/C++ & Fortran compilers from OEM
	Cluster Management	Spectrum LSF Suites for HPC - Should handle all nodes in the solution and discover new nodes - System time should be synchronous among all compute nodes, master nodes - Should be able to provision the compute nodes from master nodes.
	Operating System	- Should be able to scale to 10 nodes by just adding new nodes. RHEL for HPC

**Desktop:** Desktop should be a branded make & model (Dell, HP, Lenovo) with 3 years spares and support at Allahabad.

Product	Description
Intel Processor	Intel i7 or latest processor with 3 GHz 3M cache with 4 cores
Memory	4 GB DDR3 100Mhz
Hard Disk	1TB 7200 rpm SATA 6Gb/s Hard Drive
Media	DVDRW optical drive


  
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Ports	USB ports 4 rear & 2 front, VGA, HDMI, 2 x 1 Gig RJ45 base T ports
Operating System	64 bit Windows professional
Accessories	20" TFT Monitor, keyboard and Mouse with networking cable

**UPS for 7.5 KVA**

Description of UPS Power 7.5KVA	
Ratings (kVA/Watts)	7.5 kVA
Electrical Input	
Nominal input voltage	230V
Electrical Output	
Nominal output voltage	Single phase 230 V
Output frequency	50Hz +/- 0.1Hz
Battery	
Battery Load	2 hours backup on full workload. Reduces preventative maintenance service needs by monitoring the health and status of the external batteries and their expected runtime, Battery housing cabinet to be supplied. External batteries with 150AH
Battery replacement	Field-replaceable
Start-on-battery	Allows start of UPS without utility input
General	
Diagnostics	Full system self-test at startup
Communications	
LCD display	Graphical LCD
Audible alarms	Yes
Communication ports	(1) RS-232
Environmental	
Operating temperature	50–104°F (10–40°C), 45°C with 7.5% derating; Optimal battery performance: 77°F (25°C)

*Alex* *ASVZ*

**Head, Department of Physics  
University of Allahabad**

Required Services:-

1. Vendor/bidder is required to install the HPC system at Allahabad University Centers.
2. Installation of HPC solution including Cluster management solution, job schedulers, compilers, programming environment.
3. Two Day Training on the Software's and Hardware, Onsite covering the Basic feature, functionalities, operational capability and basic operation, configuration processes and tools.
4. Bidder has to install and run the application like VASP, Gaussian, Abinit, Qunatum Espresso, Quantum wise and graphics etc on site. University of Allahabad will provide Application license based software require to install on system.
5. 3000 x 3000 diagonalization complex matrix containing all non-zero elements in few minutes.

The cost of HPC including all the above items would be approx. Rs. 39.2 lacs.

*Note: Allahabad University is an academic institute and software should be provided by the academic route.*



PSM

**Head, Department of Physics  
University of Allahabad**

## **Technical Terms and Conditions of the Tender**

1. The bidders should give full details of being the manufacture or sole distributor of the items with documentary evidence/authorization letter.
2. The bidders should have at least five years experience in the field.
3. Annual turnover for the preceding financial year should not be less than **Rs 50 crore**.
4. Company's/firms profile, legal registrations and income tax clearance certificate should be submitted with the tender documents.
5. The bidders may not have a criminal record.
6. Certificates/documents showing the satisfactory performance of the orders and after sale service status.
7. Along with tender documents list of major clients with value of orders and actual date of completion may also be submitted. This is specifically to be mentioned that how many single orders have been completed satisfactorily of more than Rs 2 crore.

**Signature & Seal of the bidder**



# **Annexure – IV**

**(Forming part of the technical bid)**

## **General Terms and Conditions of the Tender**

1. The tender is to be submitted in two part viz. "Technical Bid" and "Financial Bid" in two separate sealed envelopes in the prescribed tender proforma separately. The financial bid will be opened only after acceptance of "Technical Bid".
2. Based on the evaluation of the technical bid submitted by the bidder, the Committee would shortlist them. The short listed bidders may be asked to make a presentation after opening of the technical bid before the committee.
3. All the items in the tender document are independent and will be considered separately. A bidder may quote for one or all the items. Detailed specifications, catalogue/literature of all the items quoted should be supplied with the technical bid.
4. All items should be with onsite comprehensive warranty for minimum period of three years.
5. Goods found not to be as per specification will be required to be replaced at the cost of the bidder.
6. The supply period shall commence from the date of issue of confirm supply order and completion period may be strictly 30 days.
7. If the specification will not be found as given specification consignment may be refused at the discretion of the University.
8. For the delayed supplies, liquidated damages @ 0.5% on entire cost of the order will be levied to the maximum of 10%. Incomplete or defective supply shall be viewed seriously and E.M.D. shall be forbidden for liquidated damages of the University.
9. The unit rates should be quoted inclusive of all taxes, duties, levies, freight, insurance, loading and unloading charges etc.
10. Rates should be quoted F.O.R. destination at the unit of the University as mentioned in the supply order.
11. Payment will be made on receipt and acceptance of the goods.
12. Income Tax and other statutory deductions will be made as per rules
13. Security deposit will be deducted @ 5% of the bill amount after adjusting it against the E.M.D. in case Of the non depositing of performance security or bank Guarantee.
14. The quantities included in the tender can be increased or decreased at the discretion of the University.
15. Rates approved will remain valid for one year, except due to change in the rate of statutory taxes, duties and other Government levies.
16. The firms/company's black listed at any stage need not to apply.
17. The lowest rate will not be claimed as claim of taking the order.
18. The Central purchase Committee of Department of Physics, University of Allahabad reserves the right to reject or accept any tender without assigning any reason.
19. The Central purchase Committee of Department of Physics, University of Allahabad reserves the right to alter/modify any or all conditions of this tender document.
20. Each bidder should clearly specify that the bidder agrees to abide by the conditions of this tender document on their printed letter head indicating thereon Sales Tax Registration, FAX, Email, Telephone No. etc.
21. All pages of the tender document are to be signed and stamped by the bidder.
22. All disputes are subject to Jurisdiction of Allahabad.

**Certified that I/We agree to the contents of terms and conditions of the tender.**

**Signature & Seal of the bidder**

Part – 'B'

Annexure – V

Proforma for submitting the Financial Bid

Sl. No.	Specification	Quantity required in Units	Rate per Unit Inclusive of all taxes, duties, levies, freight, insurance, loading charges (Rs.)
1.	High Performance Computer system (HPC)	01	