



## SINGLE BID SYSTEM

Tender Fee: Rs.0.00/-, EMD: Rs.0.00/-  
Cost of Tender: Approx. Rs. 70 Lakhs  
Last date for Sale of Documents: 10/02/2021 till 16.00hrs  
Last date for submission: 11/02/2021 till 14.00hrs  
Due date for opening bids: 11/02/2021 at 14.30hrs

### GENERAL CONDITIONS

(Tender documents consist of 12 pages)

Ref: NCB/F-201088/2020-2021 (N)

Tender Notice No.011/2020-2021

**Important Instruction:** The bids shall be enclosed in an envelope and sealed duly marked "Tender for 'High Performance Computing System with scalable Storage - Qty. 1 No.' Ref. No. NCB/F-201088/2020-2021 (N)"; and addressed and to be mailed to "The Head-Purchase". The bids are liable to be rejected if the sealed envelope is not addressed to "The Head-Purchase" with Tender Ref. No. and Item Description. Offers delivered in person shall be deposited in the Tender Box Labelled as "TENDER BOX FOR PURCHASE TENDER" kept in the Ground Floor, Reception at Administration Building. If the bids are sent through courier or mail, it should reach by submission Date and Time and NCBS will not be responsible for the delay.

## 1. MANNER & METHOD FOR SUBMISSION OF BIDS

- 1.1 All tenders shall be made in ENGLISH only.
- 1.2 The details in regard to technical specification and other terms and conditions should be cogent and clear to the extent possible.
- 1.3 FOLLOWING ANNEXURES must be filled up properly
  - (a) Technical Specifications - Annexure A
  - (b) Schedule of Experience - Annexure B
  - (c) Schedule of deviation from Specifications/conditions - Annexure C
  - (d) Schedule of price and delivery - Annexure D
- 1.4 Each page of the tender except the Price & Delivery part shall be on printed letterheads or forms and bear the signature, date, name and designation of the person signing the offer. If they are not on letterheads, a rubber stamp indicating full name, address and phone No., Telex No., Fax No. etc. of the firm shall be affixed at the end of each page. The price & delivery part shall be as Annexure D attached.
- 1.5 This tender document is not transferable. Only the party to whom the tender documents have been issued shall be entitled to quote.
- 1.6 Bids containing erasures or alterations are liable to be rejected unless countersigned by the authorised signatory.
- 1.7 All rates and total amount should be written both in figures and in words and if there is any discrepancy between the two, the lowest amount only will be considered.

GKVK, Bellary Road, Bangalore 560 065, India  
Phone +91-80-23666343 /344/345/346 . Telefax +91-80-23636662  
[purchase@ncbs.res.in](mailto:purchase@ncbs.res.in) . [www.ncbs.res.in](http://www.ncbs.res.in)



- 1.8 Tenders will be opened in the presence of attending Tenderers on **11/02/2021 at 14.30 hours**. In the event the due date is declared as holiday, the tender will be opened on the following working day.
- 1.9 If the item offered is to be imported, arrangements for import will be made by the Institute. Import duty and customs clearance will be under purchaser's scope.
- 1.10 We reserve the right to place order for part/reduced quantity than what is specified in the tender and also reserve the right to split the order to more than one supplier.
- 1.11 Any deviation/substitution in regard to the technical specification must be indicated in Annexure C of this tender document. Otherwise it shall be binding on the bidder to supply the items as specified in this tender specification.
- 1.12 All bids are to be submitted on or before the due date and time. **The bids shall be enclosed in an envelope and sealed duly marked "Tender for High Performance Computing System with scalable Storage – Qty. 1 No.", Ref. No. NCB/F-201088/2020-2021 (N)"; and mailed to the Head-Purchase.** Offers delivered in person shall be deposited in the Tender Box kept in the office.  
**Due date for opening the bids: 11/02/2021 (14.30 hours)**
- 1.13 Please return the tender papers including Conditions of Tender as well as the Annexures with your signature, rubber stamp and date affixed on each page.
- 1.14 All bids in response to this invitation of tender should be submitted in a manner and method specified above. Tender which do not comply with the above conditions are liable to be rejected.
- 1.15 Late and delayed tenders will not be considered. Therefore tenderers shall ensure that the tender reaches the Purchaser on or before the due date and time stipulated for receipt of bids.
- 1.16 Individuals signing the bid form and other supporting documents must specify the capacity in which they sign, like -
- a) Whether signing as a Sole Proprietor of the firm or his attorney.
  - b) Whether signing as a partner of the firm or his attorney
  - c) Whether signing as Director of a Limited Company.
- 1.17 National Centre for Biological Sciences reserves the right to reject any or all the tenders without assigning any reason.
2. **CATALOGUE/TECHNICAL LITERATURE**  
All necessary catalogue/drawing literature/data and details of item/s as are considered to be essential for full and correct evaluation of the bid shall invariably accompany the bid.



3. **BID GUARANTEE / EARNEST MONEY DEPOSIT**

Bid Guarantee amount of **Rs.0.00** shall be submitted by a DD (for outstation firms) or Banker's cheque (in case of local firm) from a Nationalised Bank / Foreign Bank along with the bid, drawn in favour of "National Centre for Biological Sciences, Bangalore". Alternatively, the BG amount may be submitted by way of Bank Guarantee from a nationalised bank/first class foreign bank valid for 6 months. The BGA amount will be forfeited if the successful bidder fails to accept the Letter of Intent/ Purchase order or withdraws or amends impairs or derogates from the tender in any respect within the period of validity of this tender. The offers are liable to be rejected, at the discretion of the Centre, if they are not accompanied with BGA. No interest shall be payable by NCBS for BGA amount. The BGA shall be refunded to the unsuccessful bidders once the order is released on the successful bidder.

**Micro and Small Enterprises (MSEs):**

1. Micro and Small Enterprises (MSE) must, along with their offer, provide proof of their being registered as MSE (indicating the terminal validity date of their registration) for the item tendered, with any agency mentioned in the notification of the Ministry of Micro, Small and Medium Enterprises (Ministry of MSME)
2. The MSEs are exempted from payment of earnest money and tender fees subject to furnishing of relevant valid certificate for claiming exemption as per privilege rules of Government of India.
3. The bidder submits registration of Udyog Adhar Memorandum (UAM) by Ministry of Micro Small and Medium Enterprises (MSME) vendors on Central Public Procurement Portal (CPPP). The bidders who fail to submit UAM number shall not be able to avail the benefits available to MSEs as contained in Public Procurement Policy for MSEs Order 2012 issued by MSME.

4. **PRICE**

**The Tenders to be quoted in INR.** The price/s quoted shall be firm till the complete execution of the order. All details relating to price, price breakup, inland transportation, documentation, taxes and duties, levies, freight charges, delivery terms, mode of payment, mode of Dispatch, Insurance should be clearly stated.

**This invitation is only for Class "1" and Class "2" Suppliers as prescribed in "Public Procurement (Preference to Make in India) order 2017 of GOI. Dept of DIPP" (OM No. P-4502/2/2017-PP(BE-II) dated 04<sup>th</sup> June, 2020. Necessary certification for local content must be submitted by the prospective bidders strictly as per Annexure – 2 attached with the tender document.**

For indicating the price, the tenderers may choose any/all of the following: The 'Class-I Local Supplier' / 'Class-II Local Supplier' at the time of tender, bidding or solicitation shall be required to indicate percentage of local content and provide self-certification that the item offered meets the local content requirement for 'Class-I Local Supplier' / 'Class-II Local Supplier' as the case may be.

5. The taxes (State, Central, Turnover tax, Works Contract Tax, etc.). Please specify which are applicable. The duties and other levies, freight, insurance shall be stated clearly and separately. Also please mention whether the same is included in the price/s quoted.

6. **VALIDITY OF BIDS**

**The bids shall be valid for a period of at least 180 days from the date of opening of the Price bids. Bids with shorter validity period are liable for rejection.**



7. DELIVERY

The tenderer should clearly mention the time required for supplying the item. The period of delivery will be counted (a) from the date of receipt of the order in case of Indian supplier and (b) from the date of opening of letter of credit/receipt of order (in the case of sight draft/advance draft) for foreign suppliers. The delivery date is the date at which the equipment should be delivered at NCBS.

8. PACKING

The item should be packed appropriately so that it can sustain transit hazards, multiple landing, warehousing, etc. during transit.

9. PLACE OF DELIVERY

**ALL DELIVERIES shall be effected to the National Centre for Biological Sciences, GKVK, Bellary Road, Bangalore-560065.**

10. GUARANTEE/WARRANTY

The item/s covered under this tender shall be subject to a guarantee for trouble free performance, workmanship, material etc., fulfilling the specifications mentioned in this tender for **60 months** from the date of commissioning. If any defect is found in the material, workmanship or performance during the guarantee period the same may either be repaired/replaced by the supplier as the case may be free of charge. The guarantee period for replacement of parts or repair work shall be same as above. A guarantee certificate to this effect should be forwarded to us with your invoice. For order placed on foreign suppliers, the supplier shall specifically confirm that their Indian representatives, if any, will provide with after sales service and will attend to any repairs or technical problems that may arise.

11. PERFORMANCE B/G

The successful bidder shall have to execute a performance B/G in accordance with the guarantee/warranty for 10% value of the order. This B/G has to be executed on an appropriate value of stamp paper in terms of a bank guarantee drawn on any nationalised bank or first class foreign bank and shall remain valid till the completion of the Defect Liability period/warranty period, with 6 months grace period.

12. TAXES AND DUTIES

The Centre shall deduct all taxes and duties, as applicable, from time to time from the bills payable.

13. PAYMENT TERMS

As per our Centre, 90% of the payment shall be made through Sight Draft (documents through bank) and balance 10% payable after installation, trial run and subject to acceptance by the group head through SAI and all other relevant documents, with Performance Bank Guarantee.

All claims shall cease as per the Limitation Act.

14. CLARIFICATIONS

After opening the bids, if it becomes necessary for the purchaser to seek clarifications from the bidders, the same will be sought from the bidders. In such an event, the bidders will furnish all technical information / clarifications to the purchaser to reach on or before the due date fixed for that purpose indicating the Purchaser's tender reference. If the technical clarifications sought do not reach on or before the date date fixed, the bids shall be summarily rejected without any further notice.



15. RISK CLAUSE

Notwithstanding the other terms therein, the Centre at its option will be entitled to terminate the contract and to avail from elsewhere; at the risk and cost of contractor; either the whole of the contract or any part which the contractor has failed to perform within the time stipulated or if the same performance is not available, the best and the nearest available substitute thereof. The contractor shall be liable for any loss which the Centre may sustain by reason of such risk contract in addition to penalty.

16. DISPUTE AND RESOLUTION

Any dispute or differences between the parties that cannot be settled by mutual discussion at appropriate levels shall be referred to the sole arbitration of the Director, NCBS or his nominee and his decision in the matter shall be final and binding upon the parties to the dispute. The venue of arbitration proceedings shall be Bangalore and provisions of Arbitration Act for the time being in force in India shall be applicable. In respect of any matters pertaining to such arbitration, the courts of law in Bangalore will have exclusive jurisdiction.

17. OTHER TERMS

a) If electrical/ AC/ technical works contract, appropriate license defining the required expertise from the approved Licensing authority.

b) The Centre, will at its discretion ask for a solvency certificate from your bankers.

18. DEFINITION AND MEANINGS

In constructing these conditions, specifications, etc. in the tender document or the Annexures/Appendices the following words shall mean herein assigned definitions except where the subject context is otherwise stated.

PURCHASER :	Shall mean the National Centre for Biological Sciences.
BID/TENDER :	Shall mean the proposal/document that the BIDDER submits in the requested and specified form or otherwise along with Annexures, Appendices, etc.
BIDDER/TENDERER :	Shall mean the firm/party who quotes against an enquiry.
CONTRACTOR/SUPPLIER :	Shall mean the party to whom a Work Order/Purchase Order Is awarded to undertake all or a part of the work covered by this tender document as well as an amendment orders relating to this tender issued by the Purchaser and shall include his/their legal representative, assignee/s or successor/s.
CONTRACT :	Shall mean and include the articles of agreement, Declaration form, the general and special conditions, the Annexures, the Schedule of Quantities & rates and the specifications attached hereto and the drawings, if any.
ORDER VALUE :	Shall mean total value of the Purchase Order/Work order issued against this tender item including taxes, levies, etc.



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19. TECHNICAL SPECIFICATIONS

See Annexure – 'A'

20. The Price shall be FOR NCBS Stores.

21. NCBS reserves the right to split the quantities or reject one or more offers in full or part without any reasons. Therefore NCBS decision is final and binding.

22. The quantity mentioned in the tender may be decreased/increased while ordering. However, the price quoted should be firm irrespective of change in the quantity.

23. ACCEPTANCE OF TENDERS

NCBS does not pledge itself to accept the lowest/ any tenders and reserves to itself the right to accept the whole or part of the tenders or a part of the quantity offered.

24. The Firm should quote in Rupees or FOR NCBS basis for supply.

25. Your Service Engineer should be fully trained to install the equipment and capable of maintaining the equipment during / after the warranty period.

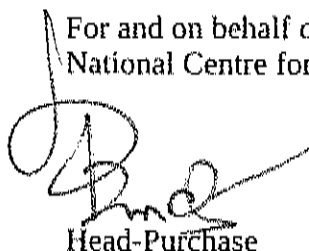
26. LIQUIDATED DAMAGES

The successful bidder will have to agree that in case the item is not supplied within the agreed delivery schedule and after a grace period of seven days, then Liquidated Damages (not in terms of penalty) will be imposed automatically and be deducted from their bill at the rate of 0.5% per week subject to a maximum of 10% of the order value.

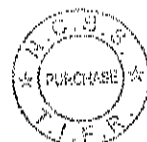
Please enter unit price, Total Price and Grand Total in figures as well as words. Unit price and Total Price may be entered below each item.

Since NCBS is a Public funded Research Organisation, registered under Government of India Notification No.51/96 – Customs and 10/97 – for Central Excise is applicable for the items listed in the notification.

For and on behalf of  
National Centre for Biological Sciences,

A handwritten signature in black ink, appearing to be 'D. M. C.', is written over a circular stamp. Below the signature, the text 'Head-Purchase' is printed.

Head-Purchase



Ref: NCB/E-201088/2020-2021 (N)

Tender Notice No.011/2020-2021

**ANNEXURE A – Technical Specification**

**High Performance Computing System with Scalable Storage – Qty. 1 No.**

**Mandatory Requirements:**

- 1) Hardware and software support for the cluster should be directly from the OEM to qualify for this tender.
- 2) The master, compute servers, storage system and network switches are preferable from the same OEM.
- 3) All the prerequisites such as no. of racks, size in racks, power, cooling, etc. should be clearly mentioned along with the proposed solution.
- 4) The storage solution should be scalable and should support security features for data availability and protection.

**Minimum Specification Required**

Sl No.	Item	Description	Quantity
<b>1</b>	<b>Master Node</b>		<b>1</b>
1.1	Processor	Dual x86 64-bit processor 3.20GHz,8C/16T,128M Cache, 155W 3200	2
1.2	Memory	Minimum 256 GB or more DDR4 3200MHz registered ECC memory to achieve 100% fully balanced memory configuration upgradable to 1.5 TB	
1.3	Storage	2.4TB SAS 12 Gb/s 10K RPM 2.5" read /write intensive drives and with minimum 8 hot swap drive bays.	4
1.4	Primary Interconnect	ConnectX-5 VPI adapter card, EDR IB (100Gb/s) , dual-port QSFP28, HCA with hardware RDMA feature, along with DAC cables.	2 ports
1.5	Secondary Interconnect	Machine with dual 10GBase-T along with SFP+ transceiver and cable (10 GbE)	2 ports
1.6	Power Supply	Redundant Hot pluggable 80 Plus Platinum or better certified Power supply with minimum 1400W PSU	2
1.7	Optical Drive	DVD R/W	1
1.8	RAID Controller	RAID controller capable of RAID 0,1,5,6 with 4GB NV RAM to connect multiple disks drives	1
1.9	Management / IPMI	Integrated IPMI 2.0 + virtual media over KVM with dedicated LAN	
1.10	Slots	System should have at least 5 x16 PCI-e Gen4 slots	
1.11	Form factor	2 U Rack mountable or better with rail kits to fit in 42U rack	as required
<b>2</b>	<b>Compute Node</b>		<b>2</b>
2.1	Processor	Dual x86 64-bit 2.35GHz, 32C/64T 128M Cache, 155W, 3200	2
2.2	Memory	DDR4 3200MHz Minimum 1TB or more ECC Registered memory; 100% fully balanced memory population to achieve full performance as per OEM Scalable memory standards Suitable to the processor architecture and upgradable to 2TB	as required
2.3	Storage	minimum 1.9 TB NVMe PCIe3.0 2.5" 3D2 TLC U.2 1DWPd, with provision to accommodate atleast 6 more NVMe drives	2 nos.
2.4	Primary Interconnect	ConnectX-5 VPI adapter card, EDR IB (100Gb/s) , dual-port QSFP28, HCA with hardware RDMA feature, along with DAC cables.	1 port
2.5	Secondary Interconnect	Machine with dual 10GBase-T along with SFP+ transceiver and cable (10 GbE)	2 ports



Sl No.	Item	Description	Quantity
2.6	Power Supply	Redundant Hot pluggable 80 Plus Platinum or better certified Power supply with minimum 2400W PSU	2
2.7	Management / IPMI	IPMI 2.0 with virtual media over LAN and KVM over LAN support.	
2.8	Slots	System should have atleast 5 x x16 PCI-e Gen4 slots with provision for addition of 2 Full Height Double width GPU cards in future.	
2.9	Form factor	2 U Rack mountable or better with rail kits to fit in 42U rack	as required
<b>3</b>	<b>Primary Communication Network</b>		
3.1	EDR Infiniband Switch	36 port Rack mountable EDR Infiniband switch (100% non-blocking architecture, with redundant power supply) with minimum number of ports corresponding to the master node + compute nodes as above, with required power and Infiniband connection cables. Complete RDMA (Remote Direct memory access Protocol) feature implemented in HCA (Host Channel Adaptor Interface) silicon and will not utilize the CPU power.	as required
<b>4</b>	<b>Secondary Communication Network</b>		
4.1	Ethernet Switch	Minimum 24 port 10 Gbps SFP stackable Managed Ethernet switch with required power and SFP transceiver cables (Number of units corresponding to the master node + compute nodes as above)	as required
<b>5</b>	<b>Software</b>		
5.1	Operating System	Certified opensource (Latest Version) 64bit	
5.2	opensource Job Scheduler and cluster monitoring web portal(s) compatible with this cluster setup		
5.3	Intel C/C++/Fortran compilers		
<b>6</b>	<b>Warranty</b>		
6.1	Hardware warranty	5 yrs onsite support from OEM	1
6.2	Cluster software support (OS, Job Scheduler, ganglia monitoring tool and other softwares installed during setup, including upgradation of OS in future and hardware firmware upgrade if necessary)	5 yrs onsite OEM support	1



Sl No.	Item	Description	Quantity
7	Scalable Storage Array		1
7.1	Scalable Storage Array:	<p>1) Dual x86 64-bit 8C 128M Cache, base frequency 3.2GHz processor, minimum 256GB or more DDR4 3200MHz ECC Registered memory with to achieve 100% Balanced memory population. The memory should be as per OEM scalable standards.</p> <p>2) Parallel file system (PFS) storage of Minimum 200 TiB usable capacity in Hardware RAID VI. Raid VI implementation should be at the hardware level. Minimum 5 GBps or higher sustained read/write performance across master and compute nodes.</p> <p>3) PFS should comprise of at least 2 storage nodes to be configured in HA with 5GBps performance.</p> <p>4) Min 1% of the proposed usable capacity should be provisioned for Metadata on a separate storage array.</p> <p>5) NL SAS 12Gb/s Interface, multipath interconnection over IB/FC.</p> <p>6) ConnectX-5 VPI adapter card, EDR IB (100Gb/s) QSFP28+, PCIe3.0 x16 with 3M DAC cable.</p> <p>7) Storage/Enclosure should have a backpane expander or free HDD bays to scale the system upto 500 TiB suitable interconnect cables.</p> <p>8) Opensource parallel filesystem implementation across primary and compute nodes.</p> <p>9) Storage system must be configured with no single point of failure.</p> <p><b>Note:</b> To meet the above requested throughput on the storage, supplier can modify the storage design as per OEM needs.</p>	

**Terms and conditions:**

- 1) Required Software: Cent OS (or equivalent); Torque management (or equivalent); Cluster management; queue management, compilers, and all libraries and software required for applications of scientific computing standard libraries like BLAS, LAPACK etc.
- 2) Any other accessories required to assemble/make the cluster work at the maximum potential should be mention and included in the offer.
- 3) Warranty: 5 years onsite OEM support for entire solution including accessories and components
- 4) Service engineer should visit Onsite, troubleshoot the problem and collect reports further to fix the hardware issue if there is any failure.
- 5) Any upgradation related to hardware , software and OS within the warranty period should include in the scope of work.
- 6) Entire unit should be replaced if there is a repeated failure in the hardware on any supplied system.
- 7) The bidder (OEM/Partner) must have supplied , installed and integrated at least five similar systems (including computing and storage) across India, preferably in R&D labs, over the last three years. Please provide a list of your installations.



ANNEXURE - B

SCHEDULE OF EXPERIENCE

Please furnish list of major supplies/works undertaken in relevant to this tender during the past two years.

Sl. No.	Name of the company with full address	Name of project	Purchase Order No. & date	Brief description	Value (Rs.)
Signature					
Name					
Designation					
Name of company					
Date					
Seal of the company					



**Ref: NCB/E-201088/2020-2021 (N)**

**Tender Notice No.011/2020-2021**

## ANNEXURE - C

### SCHEDULE OF DEVIATION FROM SPECIFICATIONS/CONDITIONS

**All deviations from the specifications/conditions shall be filled in by the bidder in this schedule.**

The bidder hereby certifies that the above mentioned are the only deviations from Technical Specification of this tender. [State NIL if no deviation is envisaged].

Signature	
Name	
Designation	
Name of the company	
Date	
Seal of the company	



ANNEXURE - D

Ref: NCB/F-201088/2020-2021 (N)

Tender Notice No.011/2020-2021

SCHEDULE OF PRICE AND DELIVERY

Sl. No.	Item	Quantity	Units	Price (Rs).	Total (Rs.)

Please enter unit price, Total Price and Grand Total in figures as well as words. Unit price and Total Price may be entered below each item.



**Bid Security Declaration**  
**(to be submitted on Company's Letter Head)**

I/We the undersigned hereby declare that if we withdraw or modify the bids during the period of its validity, or if we are awarded the contract and fail to sign the contract, or to submit a performance security before the deadline defined in the request for bids document or fail to execute the contract, we will be suspended for the period of time specified in the request for bids document from being eligible to submit bids for contracts with the entity that invited the bids.

Name and Signature  
of Authorized Signatory  
and Company Seal



**Certificate for Local Content**

“We (name of manufacturer) hereby confirm in respect of quoted item(s) that Local Content is equal to or more than 50% and come under “Class-I Local Supplier” Category. As being “Class – I Local Supplier”, we are eligible for Purchase Preference under “Make in India” Policy vide GOI Order No.P-45021/2/2017-PP (B.E.-II) dated 15.06.2017 (subsequently revised vide orders dated 28.05.2018, 29.05.2019 and 04.06.2020).

OR

“We (name of manufacturer) hereby confirm in respect of quoted item(s) that Local Content is more than 20% but less than 50% and come under “Class-II Local Supplier” Category.

The details of the location (s) at which the local value addition made is/are as under:

- 1.
- 2.
- 3.

\*Strike out whichever is not applicable

Date:

Seal & Signature of the Bidder

**NOTE:**

2. Self-certification that the item offered meets the minimum local content (as above) giving details of the location(s) at which the local value addition is made in case the bidder wishes to avail the benefits under the make in India policy, if applicable.
3. In cases of procurement for a value in excess of Rs.10 crores, the local supplier shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content to avail the benefits under the make in India Policy, if applicable.