OFFICE OF THE REGISTRAR :: DIBRUGARH UNIVERSITY
DIBRUGARH :: ASSAM
PIN: 786 004

BID DOCUMENT

FOR

NAME OF THE WORK: Supply, Installation and Commissioning of HPCC System at Dibrugarh University.

TENDER No: DU/NIT-2019/14

CUT-OUT SLIP

NAME OF THE WORK: Supply, Installation and Commissioning of HPCC System at Dibrugarh University.

TENDER NO. : **DU/NIT-2019/14** **Date: 26/06/2019**

SUBMISSION DUE DATE & TIME : 16/07/2019 up-to 11:00 A.M.

FROM: **TO:**

NAME: THE REGISTRAR
ADDRESS DIBRUGARH UNIVERSIITY
  DIBRUGARH, ASSAM

(To be pasted on the outer envelope containing "Technical"& "Commercial" bids)

OFFICE OF THE REGISTRAR :: DIBRUGARH UNIVERSITY :: DIBRUGARH

No. DU/NIT-2019/14   **Date: 26.06.2019**

Tender Notice

Sealed Tenders are invited from reputed manufactures/authorized dealers/suppliers for Supply, Installation and Commissioning of High Performance Computing Cluster (HPCC) at Dibrugarh University. Detailed specification of the items, terms & conditions etc are given below. **Last date of submission of Tender as per annexure with all relevant papers is** *16/07/2019 up-to 11:00 A.M.* to be submitted at Registrar's Office, Dibrugarh University, Dibrugarh, Assam.

Availability of Bid papers	From 26/06/2019 to 15/07/2019 between 10:00 A.M. to 3:00 P.M.
Last date for receipt of Bid	16/07/2019 upto 11:00 A.M.
Time & Date of opening of Bid	16/07/2019 at 02:30 P.M.
Place of opening of Bid	Office of the Registrar, DU
Cost of Document	500/- Non refundable
EMD	2.5 % of the Tender Value

The tender should be submitted in two separate sealed envelopes *i.e.* **Part - I** TECHNICAL BID and **Part – II** FINANCIAL BID. The technical bid shall be opened on above mentioned date and time and the financial bid of only those bidders who qualify in technical bid shall be opened on the same date or at a later date which shall be intimated to the tenderer whose technical bid are found to be valid. Dibrugarh University reserves all the rights to reject any or all the tenders without assigning any reason thereof.

<div align="right">

Sd/-
Registrar
Dibrugarh University

</div>

Copy to:
1. The Assistant Registrar (F&A), D.U. for information.
2. Dibrugarh University Website
3. Notice Board
4. Office File

<div align="right">

Sd/-
Registrar
Dibrugarh University

</div>

Part A - Terms and Conditions
Part B - Specifications

PART A - TERMS AND CONDITIONS

GENERAL INFORMATION

The tender bids duly complete in all respects, along with the necessary documents should be submitted to the Registrar, Dibrugarh University. The Technical Bids so received, shall be opened on *16/07/2019 at 02:30 P.M.* in the Office of the Registrar, Dibrugarh University in the presence of the representatives of the bidders. The Financial bids of the Tenderers shall be opened on the same date or at a later date to be intimated to the tenderers whose Technical Bids are found to be valid. Right to reject any or all Tenders, without assigning any reason thereof is reserved by Dibrugarh University.

Terms and Conditions of Supply:

1. All the manufacturers/ distributors/ stockists should also give a brief profile about their company and the facilities available with them of the quoted items. Their turnover and important firms/ Government Institutes/ P.S.U.s etc. to which they are supplying quoted items, should also be mentioned.

2. The last date and time for the acceptance of the bids is **16/07/2019 up-to 11:00 A.M.**

3. Suppliers shall submit the following documents along with their quotations:

(a) PAN/GST Registration No.

(b) Technical specifications offered by the Supplier.

(c) Technical compliance table

(d) Technical literature regarding the offered products including diagrams.

4. The rates should be mentioned in the **Schedule** attached with the Tender Document. Each page of the tender shall be signed in full and stamped with the seal by the supplier. The supplier must clearly state in what capacity he or she is signing the Tender.

5. The supplier shall submit the tender in two envelopes. The first envelope (Technical Bid) shall contain all the documents referred to in **2 above** and sealed. The second envelope (Commercial Bid) shall contain the **Schedule,** in which the supplier shall register the rates of supply. The second envelope shall also, likewise, be sealed. Both the envelope then should be put together, and should be sealed in an envelope on which the cut out slip provided as part of the tender document should be pasted, and should prescribe time and date. The Technical Bid shall be opened first to ensure that suppliers have submitted all the requisite documents. If the Technical Bids are not in order or are deficient in some respect, the commercial bids in respect of such tenders shall not be opened. The date and time of opening the financial bids shall be announced one day after opening all the Technical bids.

6. Supplier should read carefully all the instructions and terms and conditions, etc before registering rates in prescribed schedule of the tender. Taxes and duties etc. should be shown separately.

7. The Technical Documents shall be opened, at *02:30 P.M. on 16/07/2019* or on the next working day if the offices of the University remain closed due to any reason

8. Technical specifications of the instruments/equipments are given in **Annexure** to these papers (Part B).

9. The delivery and installation should be completed within 45 (forty-five) days or as specified from placing of the order. No extension shall be granted to the contractors/suppliers for the period of delivery, under any circumstances.

10. If the supplier fails to deliver the article as per the delivery schedule, the University shall be free to procure the balance/undelivered supply, at the risk and cost of the supplier, from other such suppliers.

11. The goods, articles, materials supplied by the supplier shall be accepted after inspection by an officer authorized by the competent authority. No articles/materials which do not conform to the specifications laid down in the terms and conditions or damaged in transit shall be accepted.

12. The bills of the suppliers shall be paid by the University after all the materials/articles/equipments have been received and installed, inspected.

13. Vendor must submit Compliance statement in tabular form comparing each specification of the quoted item with that given in the Tender Document **Part - B**.

14. The bidder has to install all the required applications provided by the user and also has to provide at least 1 (one) day training to the user including their group.

15. This tender document is not transferable.

16. In the event of any breach of the terms and conditions of the supply, the University may terminate the contract placed with the supplier and forfeit the security deposit of the supplier.

17. The Bidder shall have to be an Original Equipment Manufacturer (OEM) or his Authorized Dealer/Channel Partner having a Direct Purchase and Support agreement with the OEM. In case, the Bidder is a Dealer, a valid LETTER OF AUTHORIZATION from Original Equipment Manufacturer should be produced along with the bid.

18. The bidder should have average annual sales turnover of Rs. 1(one) Crore or more during the last three financial years ending 31st March, 2019. Attach firm's last 3 years audited profit and loss Account balance sheet duly audited by C.A.

19. The bidder must be ISO certified and shall have to be in the IT Business in the last three years.

20. The quantity as mentioned at Part-B (Specifications) may be increased or decreased at the time of placing Order as per requirement.

21. Tenderers are advised to study all technical and commercial aspects, instructions, forms, terms and specifications carefully in the tender document. Failure to furnish all information required in the Tender Document or submission of a bid not substantially responsive to the Tender document in every respect will be at the tenderer's risk and may result in the rejection of the bid.

22. The bidder should be registered under the Companies Act 1956 or a registered firm. Registration certificate to this effect must be produced.

23. The bidder should have executed minimum 3 (three) such projects related to HPCC in different Central/State Government Institutes/Universities/Autonomous Bodies/PSUs etc. not less than 50 % of the estimated cost of the specified equipment. Documentary evidence shall have to be produced along with the bid documents.

24. The bidder should ensure that: Defective part replacement during warranty period (3 years) within a period of seven working days with Advance Replacement Policy.

25. Bidder should be in a position to provide case logging procedure for both hardware and software failure.

26. Please specify the heat dissipation (in BTU) and max power consumption of each component when configured with the above configuration.

27. Note:

(a) Tenderers are advised to read carefully the Terms and Conditions of supply before recording the rates in this Schedule.

(b) No erasures or overwriting shall be allowed, unless they are authenticated under the full signature and the seal of the tenderer.

(c) The University reserves the right to:

    (i)   Accept/reject any/all tenders without assigning any reason thereof.

    (ii)   Revise the quantities at the time of placing the order without change in the rate quoted by the bidder.

    (iii)   Add/modify/relax or waive any of the conditions stipulated in the tender document whenever deemed necessary.

    (iv)   Award the contract to one or more tenderers for the items covered by the tender.

ITEM No	DESCRIPTION OF GOODS WITH DETAILS OF SPECIFICATIONS	Unit Price	Taxes	Qty.	Total Amount
1					
2					
3					

Signature of the Tenderer
Seal of the Firm

Part - B
Specifications

Supply, Installation and Commissioning of HPCC System at Dibrugarh University:

1. Master/Login/Compilation Node	(Qty: 1 Nos.)
Technical Specifications	
Processor	X86 Architecture
Processor Type	2 x Intel® Xeon Cascade Lake Silver Processors 16-Core, 2.1GHz, 22M or better
Chipset	Intel C621 Chipset
Memory	128GB RDIMM, 2933MT/s, Dual Rank
Memory Slots	16 DIMMS or More
No of HDD Bays	Eight or more
SSD	2 x 480GB Enterprise Class Hot Swap 2.5" SSDs
HDD(s)	6 x 4TB SAS 7.2KRPM Enterprise hot-plug 3.5" HDDs
RAID Controller	HW Raid Controller card with 8 GB NV cache
RAID Support	RAID 0, 1, 5, 6, 10, 50 & 60
Optical Drive	Slim DVD RW
NIC	2 x RJ45 Gigabit Ethernet LAN ports with 2 x 2M Gigabit Ethernet Patch Cable
No of High-Speed Interconnect port	One or more
Type of High-Speed Interconnect port	EDR (100Gbps) Infiniband card with 1 no of compatible QSFP28 cable to connect with InfiniBand Switch.
Graphics	On board Graphics.
Exp Slot(s)	Min 8 Nos of PCIe Gen3 Slots
Remote Management	IPMI 2.0 with virtual media over LAN and KVM over LAN support With required License for activation with remote installation of Operating System.
I/O Ports	3 Nos of USB ports 2.0 and above and 1 x VGA +1 HDMI (Optional)
Chassis Type	1U / 2U rack-mountable with sliding rails
P. Supply Type	Redundant, hot-plug power supplies (2 Nos. of SMPS to be supplied)
Power Wattage	Not more than 1000W
OS	Latest CentOS / Ubuntu

Security	System must include the following features:
	    Silicon-based hardware root of trust
	    Automatic secure BIOS recovery
	    Cryptographically signed firmware update
	    Firmware drift detection
	    Protection against compromised firmware execution before the OS boot
	    Intrusion alert in case chassis being opened

Local Spare Centre Production Unit, Certification and Compliance	OEM and Bidder should have ISO 9001 and 14001 Certified India Unit (Proof of Certification of India unit to be submitted). The quoted product should be certified for BIS (Bureau of Indian Standards), EMC (Electromagnetic Compatibility) Class A and RoHS . Reference document must be provided at the time of submission of tender. Bidder should have Office in Assam for last 03 years. Documentary evidence in form of Municipal Trade License/VAT/GST should be enclosed OEM should have After sales support facility in North Eastern Region and Assam for problem resolution within 24 hours. Bidder also should have adequate trained manpower for prompt after sales support. (list to be attached) The Bidder Should have min One OEM Certified Engineer
Server OEM market position	The OEM for the proposed server must be in Leaders quadrant in the last two Gartner's report of "Magic Quadrant for Modular Servers" & should have been one of the top three server vendors (by market share revenue in IDC or Gartner report) in any of the previous 2 quarters
Warranty	3 Years Onsite Comprehensive Warranty including Advance parts replacements

2. Compute/Slave/Worker Node	(Qty: 8 Nos.)
Technical Specifications	
Processor	X86 Architecture
Processor Type	2 x Intel® Xeon Cascade Lake Gold Processors 16-Core, 2.3GHz, 22M or better
Chipset	Intel C621 Chipset
Memory	256GB RDIMM, 2933MT/s, Dual Rank
Memory Slots	16 DIMMs or more
No of HDD Bays	Eight or more
RAID Controller	HW Raid Controller card with 8 GB NV cache
SSD	2 x 480GB Enterprise Class Hot Swap 2.5" SSDs

NIC	2 x RJ45 Gigabit Ethernet LAN ports with 2 x 2M Gigabit Ethernet Patch Cable
No of High Speed Interconnect port	One or more
Type of High Speed Interconnect port	EDR (100Gbps) Infiniband card with 1 nos of compatible QSFP28 cable to connect with InfiniBand Switch.
Graphics	On board Graphics
Exp Slot(s)	Minimum 3 PCIe Gen3 slots
Remote Management	IPMI 2.0 with virtual media over LAN and KVM over LAN support With required License for activation with remote installation of Operating System.
I/O Ports	Minimum 2 USB 3.0 & 1 x VGA + 1 HDMI (optional)
Chassis Type	1U/ 2U rack-mountable with sliding rails
P. Supply Type	Redundant, hot-plug power supplies (2 Nos. of SMPS to be supplied)
OS	Latest CentOS / Ubuntu

Security	System must include the following features:
	    Silicon-based hardware root of trust
	    Automatic secure BIOS recovery
	    Cryptographically signed firmware update
	    Firmware drift detection
	    Protection against compromised firmware execution before the OS boot
	    Intrusion alert in case chassis being opened

Local Spare Centre Production Unit, Certification and Compliance	OEM and Bidder should have ISO 9001 and 14001 Certified India Unit (Proof of Certification of India unit to be submitted). The quoted product should be certified for BIS (Bureau of Indian Standards), EMC (Electromagnetic Compatibility) Class A and RoHS . Reference document must be provided at the time of submission of tender. Bidder should have Office in Assam for last 03 years. Documentary evidence in form of Municipal Trade License/VAT/GST should be enclosed OEM should have After sales support facility in North Eastern Region and Assam for problem resolution within 24 hours. Bidder also should have adequate trained manpower for prompt after sales support. (list to be attached) The Bidder Should have min One OEM Certified Engineer
Server OEM market position	The OEM for the proposed server must be in Leaders quadrant in the last two Gartner's report of "Magic Quadrant for Modular Servers" & should have been one of the top three server vendors (by market share revenue in IDC or Gartner report) in any of the previous 2 quarters
Warranty	3 Years Onsite Comprehensive Warranty including Advance parts replacements

3. Primary Communication Network   (Qty: 1 Nos.)
Switch-IB 2 Based EDR InfiniBand 1U Switch 36 QSFP28 Ports 2 Power Supplies (AC) Unmanaged Standard Depth P2C Airflow Rail Kit RoHS6 with 3 Years Onsite Comprehensive Warranty

4. Secondary Communication Network   (Qty: 1 Nos.)
Ports: 24 10/100/1000 Mbps ports +4 Nos 1G SFP Uplinks Slot + L2 Managed Switch
Memory: 1 GB or higher
Flash Memory: 1 GB or higher
Switching Performance: 128 Gbps or Higher
Switching Throughput/ Forwarding Rate: 95 Mpps (Million Packets Per Seconds) or better
Operating temperature: (0 to 40°C).
The switch should be IPv6 ready from Day-1.
Uplink Ports: support for 2 numbers Gigabit Fiber and Ethernet uplinks (dual purpose port).
Solution should support Quality of Service (QoS).
Switch should operate in non-blocking mode for full capacity.
Congestion-Avoidance Feature.
The proposed switch should support all features of switch and parameters like MAC Address Table, etc. at their peak values as claimed in the Data Sheets of the Switch
The switch should support Auto-negotiation on all ports to automatically select half-or full-duplex transmission mode to optimize bandwidth.
The switch should support Automatic media-dependent interface crossover (MDIX) to automatically adjusts transmit and receive pairs if an incorrect cable type (crossover or straight-through) is installed.
Broadcast/Multicast storm control.
Multi-Level access security on switch console to prevent unauthorized users.
The switch should support port based security.
The Switch should support Dynamic ARP Inspection, and Source guard.
Should support MAC based ACLs.
Should support BPDU port protection.
Should support STP root guard.
Link Aggregation.
Spanning Tree Support.
Support for IEEE rapid spanning tree.
The switch should support Command Line Interface (CLI) support for configuration & troubleshooting purposes.
The switch should support SNMPv1, SNMPv2c, and SNMPv3.
Support for TFTP based software upload/ download.
Support for port mirroring measurement using a network analyzer
Warranty: 3 Years Warranty on Switches..

5. RACK (Qty: 1 Nos.)
The PDU should be compatible with Master Node, Compute Node and other accessories with 3 Years Onsite Comprehensive Warranty
42U Rack Frame/800X1000/Steel/ CKD/Casters Type 2
Levellers, 19" Adopter kit /42U/Loops, Perforated Door/42/800/Flat/, Perforated Door/42/800/Dual/
Swing handle / Mechanical Lock / Single Point / Common Key/Polymade
Side Panels/1000/42U/Vented/
Server /IT Rack mount power distribution unit, 1Ph, 230V, 32A, 50/60Hz, Zero U standard with 12 X C13,16A MCB X 2 Circuits - PDU Rating 7.3KVA/Bottom feed-3Mt/ Black / Inlet Plug Not Installed
Horz. Cable Organiser/1U/ Channel On Front
Cable Basket/42U/300/Black
Shelf/1000/Black
ITE / Server Rack Air Circulation module/Tower Mount/360CFM

6. KVM Switch & Console   (Qty: 1 Nos.)
17" TFT with built in Keyboard & touchpad, in a 1U single rail slide, 2 x 16port Multi-port KVM Switch with 12 x 6ft cables & 4 x 10ft cables 3 Years Onsite Comprehensive Warranty

7. Online UPS (Qty: 1 Nos.)	
Parameter	Specification
Capacity	10 KVA/9 KW @ 0.9 p.f. On-Line UPS with Inbuilt Isolation Transformer.
AC Input Voltage Range	300-470 V AC, 3 Phase @100% load
Surge Protection Device	UPS should have inbuilt 1 Phase, Type 2 surge arrester (40kA) according to EN 61643-11. It should provide Lightning Protection (according to IEC 1312-1 and EN 62305) through equi-potential bonding and eliminate transient overvoltage, originating during atmospheric discharges or switching processes.
Input Frequency	50Hz ± 10% (Suitable for Generators)
AC Output Voltage	230 V AC, 1-phase ± 1% (Sine Wave Output)
Output Frequency	50 Hz ± 0.05 Hz
Isolation Transformer	UPS output should be fully isolated by double conversion and inbuilt isolation transformer within the UPS cabinet itself. External transformer shall not be considered.
Indications & Audible Alarms	Mains On, Inverter On, Overload, Load On Mains, Load On Battery, Battery Low

Digital Metering	LCD display for measurement of AC Voltage, Battery voltage, Battery Current, Load Current, Output frequency.
Battery Back-up & Other Details	The system must be capable of providing requisite Battery back-up time of 60 minutes on each UPS, using 12V, VRLA Sealed Maintenance Free Batteries.
Certification	• BIS Certificate for Quoted Model • CE Certification (confirming to IEC 62040-1 & IEC 62040-2 Standards) • ISO 9001, ISO 14001, OHSAS 18001, ISO 27001 certified. • RoHS Compliance Copies of the above certifications should be submitted with the technical Bid (compulsory).
After Sales Support & Manufacturer's Credibility	• UPS OEM Should have their own service Centres in Tezpur, Assam • UPS OEM should have a dedicated Toll Free No. for service call logging & resolution (no. to be provided) UPS OEM should not have been blacklisted or debarred from business from any government organization in last 10 years
Warranty	3 Years on Machine & 2 Years on Batteries.

8. Software   (Qty: 1 Set.)
Intel Parallel Studio XE Cluster Edition for Linux - Floating Academic 2 users for 3yrs

9. Software Stack & Installation
The Cluster Management product must support a mixture of Operating Systems & hardware
The Cluster Management product must support both a Graphical User Interface and a Command Line Interface.
The Cluster Management product Should have an Application Programming Interface.
A single Graphical interface must be able to manage multiple clusters at different locations.
The Cluster Management product Should have Logical grouping of nodes.
No single point of failure for the head / management / controller nodes. These nodes must be resilient with no single points of failure.
The Cluster Management product Should have management task distribution / delegation to other nodes.
The Cluster Management product Should have monitoring features for failing hardware and
The Cluster Management product Should supports both NVIDIA GPUs and Intel XEON Phi
The cluster management software must be commercially supported and under active development.
The cluster management software must support both traditional HPC computing, OpenStack & Hadoop.
The cluster management must provide support for multiple work load managers on different clusters.
The cluster management must support of diskless / stateless compute nodes.

The Cluster Manager should have provision of different Linux OS images on all or part of the Cluster in an efficient manner in terms of time and bandwidth required.
The Cluster Manager must provide a mechanism to generate statistics relating to system performance and utilization.
The following system software and scientific libraries must be provided to enable the generation and running of optimized code: high quality native compiler and libraries for C, C++ and Fortran programming. GNU toolchain including compiler collection, make, etc. fabric optimized MPI and MPICH2. OpenMP. Optimized BLAS, PBLAS, LAPACK and SCALAPACK libraries.
The Cluster Manager should have provision of system health check diagnostic routines provide proactive warning of problems, e.g. by sending an email to support staff.
The Cluster Manager should have Integrated management of physical and virtual machines
The cluster Manager must be capable of monitoring InfiniBand, capable of monitoring Intel OmniPath and bursting into cloud.
The cluster must have a feature for Redundant Failover Master Nodes.
The cluster must have a feature of Off-loadable Provisioning, Multi-Cluster Management.
The cluster suite should have minimum 3-year subscription and support from day one.
The proposed cluster suite should have option for renewal of subscription/license.

Signature: ………………………….......................   Date..................................

Name   :…………………………......................

 Address :…………………………….................

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Mobile No……………………………...................