

**TENDER DOCUMENT FOR
UPGRADATION OF EXISTING HIGH
PERFORMANCE COMPUTING CLUSTER**

**भारत सरकार/Government of India
अंतरिक्ष विभाग/Department of Space
उत्तर-पूर्वी अंतरिक्ष उपयोग केंद्र/North Eastern Space Applications Centre
उमियम/Umiam-793103, मेघालय/Meghalaya**

भारत सरकार/GOVERNMENT OF INDIA
अंतरिक्ष विभाग/DEPARTMENT OF SPACE
उत्तर-पूर्वी अंतरिक्ष उपयोग केंद्र/NORTH EASTERN SPACE APPLICATIONS CENTRE
उमियम/UMIAM-793103, मेघालय/MEGHALAYA

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निविदा आमंत्रण सूचना / NOTICE INVITING TENDER

निदेशक एनई-सैक उमियम मेघालय, प्रतिष्ठित सेवा प्रदाताओं, फर्मों, ठेकेदारों आदि को निम्नलिखित के लिए मोहरबंद प्रस्तावों को दो बोली में आमंत्रित करते हैं/Director, NESAC, Umiam, Meghalaya invites sealed offers in two bids from reputed Firms, Contractors etc for the following:

एनआईटी सं. / NIT No.	कार्य का नाम / NAME OF THE WORK	इएमडी(₹) डीडी के रूप में / EMD (₹) IN THE FORM OF DD	निविदा शुल्क / TENDER FEE (₹)
NESAC/732/2016	Upgradation of Existing High Performance Computing Cluster at NESAC, Umiam, Meghalaya.	₹1,30,000/-	₹500/-

दस्तावेजों के विक्रय का दिनांक/ Dates for selling of tender documents: 25.07.2016 to 24.08.2016 upto 1300 Hrs

निविदा दस्तावेजों को जमा करने की अन्तिम तिथि व समय / Last date & Time for submission of tender documents: 24.08.2016 upto 1400 Hrs

निविदा खोलने की तिथि, समय व स्थान / Date, Time & Venue of Bid Opening: 24.08.2016 at 1500 Hrs at एनई-सैक, उमियम / NESAC, UMIAM

OFFERS ARE TO BE SUBMITTED IN TWO PARTS ONLY

PART-I : TECHNICAL & COMMERCIAL

PART-II : PRICE BID

INSTRUCTIONS ARE AS PER TENDER DOCUMENTS

NOTE:

Tender documents can be downloaded from the NESAC Website: www.nesac.gov.in

Dated: 23.07.2016

Sd/-
निदेशक, एनईसैक / Director NESAC

भारत सरकार/GOVERNMENT OF INDIA
अंतरिक्ष विभाग/DEPARTMENT OF SPACE
उत्तर-पूर्वी अंतरिक्ष उपयोग केंद्र/NORTH EASTERN SPACE APPLICATIONS CENTRE
उमियम/UMIAM-793103, मेघालय/MEGHALAYA

एनआईटी सं./ NIT. No. NESAC/732/2016

दिनांक / Date: 23.07.2016

TENDER DETAILS

The bid is required to be submitted in **two parts**. One part is the **Technical Bid** and the other part is the **Price Bid**.

The Bidder shall submit the bids in two separate envelopes. One envelope shall contain Technical bid and the other shall contain the Price bid. The bidder shall seal the Technical Bid and the Price Bid in two separate envelopes duly marked as “**PART - I**” and “**PART - II**” respectively. Both the envelopes shall then be sealed in one outer (main) envelope along with EMD. The main envelope must be sent to **Administrative Officer, North Eastern Space Applications Centre (NESAC), Government of India, Department of Space, Umiam - 793103, Meghalaya.**

Sd/-

निदेशक एनई-सैक/Director, NESAC

1.0 INTRODUCTION:

NESAC is planning to upgrade the existing High Performance Computing (HPC). It is expected to cater the computational requirement of NESAC. This is a Mid-level HPC which requires upgradation for running WRF model in very high resolution grids. Now, NESAC has already started the running of WRF in high resolution grid to get more accurate prediction under FLWES project.

The Bidding Document may be obtained from the NESAC or may be downloaded from NESAC's Website <http://nesac.gov.in> and the bid should be submitted to the Administrative Officer, North Eastern Space Applications Centre(NESAC), Department Of Space, Government of India, Umiam 793013 (Shillong), Meghalaya, India.

1. Please note that all information desired needs to be provided. Incomplete information may lead to non-selection.
2. All bids must be accompanied by Bid Security as specified in Bid Document.
3. NESAC reserves the right to change the Dates of Submission and specifications mentioned in the Tender document, the changes if made will be uploaded in the NESACWebsite.

Date and Time of commencement inspection/sale of Bid Document	25.07.2016 upto 1300 Hrs
Last Date for requesting any clarification	23.08.2016
Last Date and time for receipt of bids at NESAC office	24.08.2016 upto 1400 Hrs
Date and time of opening of Technical bids	24.08.2016 upto 1500 Hrs
Date and time of opening of opening of Price bids	Will be advised separately
Cost of Tender Document	₹ 500 (Rupees Five Hundred)only
Earnest Money Deposit	₹1,30,000/- (Rupees One Lakh Thirty Thousand only)
Contact person in NESAC	Administrative Officer
Address of communication and submission of bids	Administrative Officer North Eastern Space Applications Centre Department of Space, Government of India Umiam – 793103, Meghalaya
Bid Document Availability	Bidding Document can be downloaded from NESAC's Website : www.nesac.gov.in

2.0 INSTRUCTION FOR BIDDERS (IFB)

Table of Clauses:-

Clause	Topic
1.0	Introduction
2.0	Instruction to Bidder (IFB)
3.0	Functional Overview of High Performance computing Cluster
4.0	List of Deliverables
5.0	Eligibility Criteria
6.0	Cost of Bidding Document
7.0	Earnest Money Deposit
8.0	Bidding Documents
9.0	Clarification of Bidding Documents
10.0	Amendment of Bidding Documents
11.0	Preparation of Bid
12.0	Terms and Conditions
13.0	Bid Prices
14.0	Validity of Bid
15.0	Instructions to Tenderers
16.0	Terms and Conditions of Tender
17.0	Payment Terms
18.0	Warranty and Replacement
19.0	Delivery Terms
20.0	Force Majeure
21.0	Technical Specifications
22.0	Services
23.0	Others
24.0	Compliance/ Deviation
25.0	Formats
A)	Bid Form (Technical Bid)
B)	Bid Form (Price Bid)
C)	Performance Bank Guarantee
D)	Compliance Statement
E)	Manufacturer Authorization Format
F)	Organizational profile with Similar/ past Experience
G)	Service Support Details
26.0	Price Bid

3.0 FUNCTIONAL OVERVIEW OF HIGH PERFORMANCE COMPUTING CLUSTER & EXISTING HPC CLUSTER INFRASTRUCTURE

The existing HPC Cluster consist of the followings and which needs to be upgraded for higher performance by adding additional Compute Nodes and increasing the throughput of the Cluster from 1 GBPs to 56GBps Backbone Connectivity.

Sl. No.	Description	Model	Qty
1	Master Node	IBM X3650 M4	1
2	Compute Nodes	IBM X3530 M4	6
3	Storage	EMC VNXe 3150	1
4	Operating Software	Red Hat Ent. Linux	1 Master & 6 Compute Nodes
5	Cluster Management Software	IBM Platform HPC	7
6	Gigabit Network Switch	Summit X440-8P	2
7	42 U Rack	Netrack	1
8	Console	Aten CL1000M	1

4.0 LIST OF DELIVERABLES (REQUIREMENTS)

The existing HPC Cluster needs to be upgraded by adding 4 nos. or more Compute Nodes and the backbone connectivity needs to be upgraded from existing 1GB infrastructure to 56Gb/s full bidirectional bandwidth by using InfiniBand switch.

The entire cluster needs to be installed and re-configured with Red Hat Linux and Cluster Management Software (Commercial/Open source). In accordance with the envisaged architecture, the following table gives a consolidated view of the expected deliverables with quantities.

Sl. No.	Item	Qty	Description
Servers, Storage & Management Consoles			
1	Servers (Compute Nodes)	4	Servers (Compute Nodes) to increase computing capacity of the existing HPC cluster set up
2	Red Hat Enterprise Linux for Compute Nodes	4	Operating Software for the Compute Nodes
3	Infini Band Switch	1	Mellanox's latest InfiniBand switch device, to provide up to 56Gb/s full bidirectional bandwidth per port
4	Infiniband Cards	11	In order to connect the Infiniband band switch with the existing 7 Servers and 4 New Servers
5	Storage Upgradation (EMC VNXe 3150)	1	Existing EMC VNXe 3150 storage needs to be upgraded from 12 TB NL SAS to 24 TB NL SAS
Cluster Management Software & Configuration			
6	Cluster Management Software & Configuration	1	<p>EITHER</p> <p>a) supply of 4 additional licenses of Cluster management software for connecting 4 New Compute Nodes with Cluster management Software, workload management tool and scheduler</p> <p>OR</p> <p>b) Open Source Cluster Management Software is to be installed and the entire cluster [1 Master & 10 (6 + 4) Compute Nodes] needs to be re-configured with the following :</p> <ol style="list-style-type: none"> 1. Cluster Management 2. MPI Library 3. GPU & Co-processor Scheduling 4. Workload Management 5. Application Integration 6. Web Based Cluster Health Monitoring
Services & Training			
7	Installation & commission which includes 3 days onsite training after the successful installation of entire HPC	1	Installation of new Hardware, OS and configuration with the existing HPC Cluster setup.

6.0 COST OF BIDDING

- 6.1 **Cost of Tender Document: ₹500/- (Five Hundred) only** in the form of Crossed demand draft drawn on any Nationalized Bank in favor of Director, NESAC and payable at State Bank of India, Umiyam Branch (Branch Code 2010).
- 6.2 The Bidder shall bear all costs associated with the preparation and submission of its bid, and "the Purchaser", will, in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

7.0 EARNEST MONEY DEPOSIT

- 7.1 Earnest Money Deposit (EMD) of ₹1,30,000/- (Rupees One Lakh Thirty Thousand only) only should be submitted along with the bid in the following manner:
- 7.1.1 Crossed demand draft drawn on any Nationalized Bank in favor of Director, NESAC and payable at State Bank of India, Umiyam Branch (Branch Code 2010).
- 7.1.2 EMD submitted in any form other than as specified above shall not be accepted and shall lead to rejection of the offer.
- 7.2 EMD shall be forfeited in the following events:
- 7.2.1 If the offer is withdrawn during the period of validity of the offer or any agreed extension.
- 7.2.2 If the offer is modified/alterd without the knowledge of NESAC.
- 7.2.3 If the tenderer backs-out.
- 7.2.4 If the tenderer attempts to procure the contract by furnishing false/incorrect documents and by giving false declarations.
- 7.3 The EMD of the unsuccessful bidders shall be returned within a reasonable time or after expiry of the validity period. No interest shall be paid by NESAC on EMD.
- 7.4 Any offer without the EMD shall be summarily rejected.

8.0 THE BIDDING DOCUMENTS

The Products required, Bidding procedures, and contract terms are prescribed in the Bidding Documents. The Bidding Documents include:

- Instruction for Bidders (IFB)
- Terms & Conditions
- Technical Specification (TS)
- Bid Forms, Price Schedules and other Formats
- Other Terms & Conditions, Compliances etc.

The bidder is expected to examine all instructions, forms, terms and conditions, specifications given in the Bidding Document. Failure to furnish all information required by the bidding Document or to submit a Bid not substantially responsive to the bidding document in every respect will be at bidder's risk and may result in rejection of the Bid.

9.0 Clarification of Bidding Documents

Bidders requiring any clarification of the Bidding Document may notify NESAC in writing at the address or by e-mail indicated in Invitation to Bid on or before 23.08.2016 upto 1400 Hours.

10.0 Amendment of Bidding Documents

At any time prior to the deadline for submission of Bids, NESAC, for any reason, whether, at its own initiative or in response to a clarification requested by a prospective Bidder, may modify the Bidding Document, by amendment.

Notification of amendments will be put up on NESAC's website and will be binding to all bidders

In order to allow prospective Bidders reasonable time in which to take the amendment into account in preparing their bids, NESAC at its discretion may extend the deadline for a reasonable period as decided by NESAC for submission of the bids.

11.0 PREPARATION OF BID

11.1 Languages and Measures: All documents pertaining to the contract including specifications schedule notices, correspondence operating and maintenance instructions drawing or any other writing shall be written in English language. The metric system of measurement shall be used exclusively in this contract.

11.2 Two Bid Proposals:

11.2.1 Each Bid shall be in 2 (Two) Parts viz. Part- I Technical Proposal and Part -II Price Proposal

11.2.2 All Bidders are requested to follow carefully the following instructions before preparing their offer.

11.3 PART I : Technical Bid

- i. This part should contain detailed specifications of the items quoted by you along with Technical literature and leaflets if any.
- ii. A compliance statement showing the compliance of the item quoted by you with that of item tendered by us should be prepared and enclosed to this.
- iii. Any other information called for in the tender related technical and specifications can also come in this part.
- iv. Prices should not be indicated in this cover.

Tender No.	:	
Due Date	:	
PART-I	:	<u>TECHNICAL & COMMERCIAL BID</u>
The Administrative Officer North Eastern Space Applications Centre Department of Space, Government of India, Umiam – 793 103 Meghalaya		
From:		

11.4 PART II : Price Bid

- i. The prices applicable for the items, item-wise in response to the tender shall come into this part.
- ii. Tenderer shall indicate very clearly item-wise prices with reference to their technical offer.
- iii. Price part prepared as above shall be enveloped and superscribed as follows:

Tender No.	:	
Due Date	:	
PART II	:	<u>PRICE BID</u>
The Administrative Officer North Eastern Space Applications Centre Department of Space, Government of India, Umiam – 793103 Meghalaya		
From:		

In case you are going to download the documents from our website and submitting the offer, you are requested to submit the DD towards Tender fee in a separate cover along with a covering letter duly superscribing on the cover "Tender fee in respect of File No."

Quotations submitted contrary to above instructions are liable to be rejected

12.0 TERMS AND CONDITIONS

- 12.1 Vendor shall submit the technical bid and commercial bid separately in different envelopes. The technical bid shall be opened first and the commercial bid of only those vendors who qualify the technical bid shall be opened for the final consideration.
- 12.2 The technical bid shall contain all the tender documents and supporting documents excluding the cost of the system. The commercial bid shall contain the price of the system quoted in the technical bid. If the price of the quoted system appears in the technical bid, the offer shall be summarily rejected. Both the technical and commercial bid shall be kept in a single envelope and submitted.
- 12.3 Quotations should include the balance sheet having annual turnover of **₹ 1,00,00,000.00 in any one of the last 3 preceding financial years**. Income Tax statements, up-to-date Sales Tax, Income Tax, and Service Tax registration certificate should be enclosed.
- 12.4 Vendor must submit detailed design & layout of proposed architecture along with the technical bid.
- 12.5 The offer of the vendors quoting only part of the system shall be rejected. Only those vendors who quote for entire system shall be considered and P.O will be awarded for the entire project.
- 12.6 The components mentioned in the Specification are minimum essential components. Vendors may quote for additional items (clearly mentioning whether essential or optional), if they feel those are required for successful running of their cluster computing system. If an additional item is referred as essential component, the cost of that component also will be included for computing the total system cost and that will be used for further cost comparisons.
- 12.7 Vendor must attach detailed data sheet of quoted Model/product along with the technical bid.
- 12.8 Vendor must be an Authorized Business Partner of the principal / manufacturer for the brand it is offering. The necessary authorization letter from OEM to be provided along with technical offer.
- 12.9 Vendor must attach letter from the manufacturer company stating that vendor is authorized to submit the proposal against this tender enquiry indicating tender number.

13. BID PRICES

- 13.1 Vendor must have to quote individual prices for each item along with the total package cost. The lowest financial bid shall be calculated on the basis of lowest total price and not on the basis of price of each individual component. A firm quoting lowest price for any / some individual component but amounting to more than the lowest price in terms of total cost, under no circumstances shall qualify to be considered for awarding the order of the whole system or for those components for which they have quoted the lowest.
- 13.2 NESAC reserves the right to purchase only some selected components out of the items quoted and in such cases the total price of package shall be the algebraic sum of the individual component price, ordered for.

- 13.3 The price quoted for all hardware shall inclusive of transportation up to NESAC, Umiam from the factory / storage site. However, all prices shall be inclusive of installation, commissioning and training on operation & maintenance at NESAC,Umiam.
- 13.4 The percentage of tax (all types) must be quoted in clear terms separately. If the percentage of taxes is not mentioned separately, it will be presumed that the rates quoted are inclusive oftaxes.

14.0 VALIDITY OF THE BID

The Bid along with prices and others Terms & Conditions shall be valid for a minimum period of 180 days from last date of submission of the tender.

15.0 INSTRUCTIONS TO TENDERERS

- 15.1 Tenders should be sent in sealed envelopes super scribing the relevant tender No. and the due date of opening. Only one tender should be sent in each envelope.
- 15.2 Late/Delayed tenders will not be considered.
- 15.3 Sales tax and/or other duties/levies where legally leviable and intended to be claimed should be distinctly shown separately in the tender.
- 15.4 Your quotation should be valid for 180 days from the date of opening of the tender.
- 15.5 Prices are required to be quoted according to the units indicated in the annexed tender form. When quotations are given in terms of units other than those specified in the tender form, relationship between the two sets of units must be furnished.
- 15.6 Preference will be given to those tenderers offering supplies from ready stock and on the basis of FOR destination/delivery at site.
- 15.7 All available technical literature catalogues and other data in support of the specification and details of the items should be furnished along with the offer.
- 15.8 Samples, if called for, should be submitted free of all charges by the tenderer and the purchaser shall not be responsible for any loss or damage thereof due to any reason whatsoever. In the event of non-acceptance of tender, the tenderer will have to remove the samples at his own expense.
- 15.9 Specifications: Stores offered should strictly confirm to our specifications. Deviations, if any should be clearly indicated by the tenderer in their quotation. The tenderer should also indicate the Make/Type number of stores offered and provide catalogues, technical literature and samples, wherever necessary along with the quotations. Test Certificates wherever necessary should be forwarded along with supplies. Whenever options are called for in our specifications, wherever specifically mentioned by us, the tenderer could suggest changes to specifications with appropriate response for the same.
- 15.10 The Purchaser shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portion of the quantity offered and the tenderers shall supply the same at the rates quoted.
- 15.11 Corrections, if any, must be attested. All amounts shall be indicated both in words as well as in figures. Where there is difference between amounts quoted in words and figures, amount quoted in words shall prevail.

15.12 The Purchaser reserves the right to place order on the successful tenderers for additional quantity upto 25% of the quantity offered by them at the rates quoted.

15.13 The authority of the person signing the tender, if called for should be produced.

16.0 TERMS AND CONDITIONS OF CONTRACT

16.1 Definitions: The term 'Purchaser' shall mean The President of India or his successors, or officials authorized to sign contracts on his behalf. The term 'Contractor' shall mean, the person, firm or company with whom or with which the order for the supply of stores is placed and shall be deemed to include the Contractor's successors, representatives, heirs, executors and administrators, unless excluded by the contract. The term 'Stores' shall mean, what Contractor agrees to supply under the contract as specified in the Purchase Order including erection of plants and machinery and subsequent testing, should such a condition be included in the Purchase Order. The term 'Purchase Order' shall mean, the communication signed on behalf of the Purchaser by an Officer duly authorized intimating the acceptance of the terms and conditions mentioned or referred to in the said communication accepting the Tender or offer of the Contractor for supply of stores or plant, machinery or equipment or part thereof.

16.2 Prices: Tenders offering firm prices will be preferred. Where a price variation clause is insisted upon by tenderer, quotations with a reasonable ceiling should be submitted. Such offers should invariably be supported by the base price taken into account at the time of tendering and also formula for any such variations.

16.3 Security Deposit: On acceptance of tender, the Contractor shall, at the option of the Purchaser and within the period specified by him deposit with him in cash or in any other forms as the Purchaser may determine, security deposit not exceeding ten percent (10%) of the value of the contract as the Purchaser shall specify. If the Contractor is called upon by the Purchaser to deposit security and the Contractor fails to provide the security within the period specified, such failure shall constitute a breach of the Contract and the Purchaser shall be entitled to make other arrangements for the re-purchase of the stores contracted for at the risk of the Contractor in terms of sub-clause (ii) and (iii) of clause 10(b) here-of and/or to recover from the Contractor damages arising from such cancellation.

16.4 Packing Forwarding & Insurance: The Contractor will be held responsible for the stores being sufficiently and properly packed for transport by rail, road, sea or air, to withstand transit hazards and ensure safe arrival at the destination. The packing and marking of the packages shall be done by and at the expense of the Contractor. The Purchaser will not pay separately for transit insurance, all risks in transit being exclusively of the Contractor and the Purchaser shall pay only for such as are actually received in good conditions, in accordance with the contract.

16.5 Dispatches: The Contractor is responsible for obtaining a clear receipt from the Transport Authorities specifying the goods dispatched. The consignment should be dispatched with clear Railway Receipt/Lorry Receipt. If sent in any other mode, it is at the risk of the Contractor. Purchaser will take no responsibility for short deliveries or wrong supply of goods when the same are booked on 'said to contain' basis. Purchaser shall pay for only such stores as are actually received by them in accordance with the contract.

16.6 Test Certificate: Whenever required, test certificates should be sent along with the dispatch documents.

16.7 Acceptance of Stores: The Contractor shall tender the stores for inspection at such places as may be specified by the Purchaser at the Contractor's own risk, expenses and cost. It is expressly agreed that the acceptance of the stores contracted for is subject to final approval by the Purchaser, whose decision shall be final. If in the option of the Purchaser all or any of the stores that do not meet the performance or quality requirements specified in the Purchaser order, they may be either rejected or accepted at price to be fixed by the Purchaser and his decision either reject or accept at price to be fixed by the Purchaser and his decision as to rejection and the price to fixed shall be final and binding on the Contractor. If the whole or any part of the stores supplied are rejected in accordance with Clause No. 8 (c) above the Purchaser shall be at liberty, with or without notice to the Contractor, or to purchase in the open market at the expense of the Contractor, stores meeting the necessary performance and quality contracted for in place of those rejected, provided that either the purchase, or the agreement to purchase, from another supplier is made within six months from the date of rejection of the stores as aforesaid.

16.8 Rejected Stores: Rejected stores will remain at destination at the 'Contractor' risk and responsibility. If instruction for their disposal are not received from the Contractor within a period of 14 days from the date of receipt of the advice of rejection, the Purchaser or his representative has, at his discretion the right to scrap sell or consign the rejected stores to Contractor's address at the Contractor's entire risk and expense, freight being payable by the Contractor at actual.

16.9 Delivery: The time for and the date of delivery of the stores stipulated in the Purchase Order/Contract shall be deemed to be the essence of the contract, and delivery must be completed within 6-8 weeks from the date of placement of order. Should the Contractor fail to deliver the stores or any consignment thereof within the period prescribed for such delivery, the Purchaser shall be entitled at his option either. To recover from Contractor as agreed liquidated damages and by way of penalty, a sum of 2% of the price of any stores which the Contractor has failed to deliver as aforesaid, for each month or part of a month, during which the delivery of such stores may be in arrears, or (ii) to purchase elsewhere, without notice to the Contractor on the account and at the risk of the Contractor, the stores not delivered or others of a similar description (where others exactly complying with the particulars are not, in the opinion of the Purchaser readily procurable such opinion being final) without canceling the contract in respect of the consignment (s) not yet due for delivery or (iii) to cancel the contract or a portion thereof and if so desired, to purchase or authorize the purchase of stores not so delivered of others of similar description (where others exactly complying with the particulars are not, in the opinion of the Purchaser readily Procurable, such opinion final) at the risk and cost of the Contractor. In the event of action being taken under sub clause (ii) & (iii) of clause 10 (b) above, the Contractor shall be liable for any loss which the Purchaser may sustain on that account, provided that the re- purchase or, if there is an agreement of repurchase that such agreement is made within six months from the date of such failure. But the Contractor shall not be entitled to any gain on such repurchase made against default. The manner and method of such repurchase shall be at the discretion of the Purchaser whose decision shall be final. It shall not be necessary for the Purchaser to serve a notice of such repurchase on the defaulting Contractor. This right shall be without prejudice to the right of the Purchaser to recover damages for breach of Contract by the Contractor.

16.10 Extension of time: As soon as it is apparent that contract dates cannot be adhered to, an application shall be sent by the Contractor to the Purchaser. If failure, on the part of the Contractor to deliver the stores in proper time shall have arisen from any cause which the Purchaser may admit as reasonable ground for an extension of the time (and his decision shall be final) he may allow such additional times as he considers it to be justified by circumstances of the case without prejudice to the Purchaser's right to recover liquidated damages under clause 10 hereof.

16.11 **Payment:** Contractor's bill will be passed for payment only after the stores have been received, inspected and accepted by the Purchaser.

16.12 **Mode of Payment:** Normally payment will be made for the accepted stores within 30 days from the date of receipt of the materials.

16.13 **Recovery of Sums Due:** Whenever any claim for payment of, whether liquidated or not, money arises out of or under this contract against the Contractor, the Purchaser shall be entitled to recover such sum by appropriating, in part or whole the security deposited by the Contractor, if a security is taken against the contract. In the event of the security being insufficient or if no security has been taken from the Contractor, then the balance or the total sum recoverable, as the case may be, shall be deducted from any sum then due or which at any time thereafter may become due to the Contractor under this or any other contract with the Purchaser, should this sum be not sufficient to cover the full amount recoverable, the Contractor shall pay to the Purchaser on demand the remaining balance due. Similarly, if the Purchaser has or makes any claim, whether liquidated or not against the Contractor under any other contract with the Purchaser the payment of all money payable under the contract to the Contractor including the security deposit shall be with-held till such claims of the Purchaser are finally adjudicated upon and paid by the Contractor.

16.14 **Indemnity:** The Contractor shall warrant and be deemed to have warranted that all stores supplied against this contract are free and clean of infringement of any Patent, copyright or trademark and shall at all times indemnify the Purchaser against all claims which may be made in respect of the stores for infringement of any right protected by patent. Registration of design or Trade mark and shall bear all risk of accidents or damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for the sufficiency of all the means used by him for the fulfillment of the contract.

16.15 **Arbitration:** In the event of any question, dispute or difference arising under these conditions contained in the purchase order or in connection with this Contract, (except as to any matters, the decision of which is specifically provided for in these conditions) the same shall be referred to the sole arbitration of the Sr. Head, Purchase & Stores or of some other person appointed by him. It will not be a point of objection that the arbitrator is a Government servant, that he had to deal with matter to which the contract relates or that in the course of his duties as a Government servant he has expressed views on all or any of the matters in dispute or difference. The award of the arbitrator shall be final and binding on the parties of this contract.

It is a term of this contract:-

16.15.1 If the arbitrator be the Head of the Purchaser's Office.

16.15.2 In the event of his being transferred or vacating his office by resignation or otherwise, it shall be lawful for his successor-in-office either to proceed with the reference himself, or to appoint another person as arbitrator, or

16.15.3 In the event of his being unwilling or unable to act for any reason, it shall be lawful for the Head of Purchaser's Office to appoint another person as arbitrator, or If the arbitrator be a person appointed by the Head of the Purchaser's Office:

In the event of his dying, neglecting to act, or resigning or being unable to act, for any reason, it shall be lawful the Head of the Purchaser's Office either proceed with reference himself or to appoint another person as arbitrator in place of the outgoing arbitrator.

Subject to as aforesaid, the arbitration Act, 1940 and the rules thereunder and any statutory modification thereof for the time being in force shall be deemed to apply to the arbitration proceeding under this clause. The Arbitrator shall have the power to extend with the consent of the Purchaser and the Contractor the time for making and Publishing the award. The venue of arbitration shall be the place as the Purchaser in his absolute discretion may determine. Work under the contract shall, if reasonably, possible, continue during Arbitration Proceedings.

16.16 Counter Terms and Conditions of Suppliers:

Where counter terms and conditions/printed or cyclostyled conditions have been offered by the supplier, the same shall not be deemed to have been accepted by the Purchaser unless specific written thereof is obtained.

16.17 Security of Purchaser's Materials:

Successful tenderer will have to furnish in the form of a bank guarantee or in any other form as called for by the Purchaser towards adequate security for the materials/property provided by the Purchaser for the due execution of the contract.

16.18 Jurisdiction:

The contract shall be governed by the Laws of India for the time being in force. The courts of Ahmedabad only shall have jurisdiction to deal with and decide any legal or dispute arising out of this contract.

16.19 Liquidated Damages:

If the Contractor fails to deliver the stores within the time specified in the contract or any extension thereof, the Purchaser shall recover from the Contractor as liquidated damages sum of one-half of one percent (0.5 percent) of the contract price of the undelivered stores for each calendar week of delay or part thereof. The total liquidated damages shall not exceed ten percent (10 percent) of the total contract price. Stores will be deemed to have been delivered only when all its component parts are also delivered. If certain components are not delivered in time, the stores will be considered as delayed until such time as the missing part are delivered.

16.20 Applicable Law:

The contractor shall be interpreted, construed and governed by the laws of India.

17.0 Payment Terms:

17.1 NESAC will make **the full payment within 30 days** from the date of installation and acceptance of the instruments at NESAC.

17.2 A performance bank guarantee of 10% of the total cost of the system shall be provided by the vendor before the release of Payment. The bank guarantee shall be valid for the entire warranty period of the system.

18.0 Warranty and Replacement:

18.1 The supplier shall warrant that the goods supplied under this contract are new, unused, of the most recent or current models and that, they incorporate all recent improvements in design and materials unless provided otherwise in the contract. The supplier further warrants that all goods supplied under this contract shall have no defect arising from design, materials or workmanship (except when the design and/or material is required by the purchaser's Specifications) or from any act or omission of the supplier, that may develop under normal use of the supplied goods in the conditions prevailing in Shillong. The warranty should be comprehensive on site, repair/replacement basis.

- 18.2 All the hardware and software shall have three year onsite comprehensive warranty covering all parts & labour from the date of acceptance of the systems by NESAC. During the warranty period, the vendor will have to undertake comprehensive maintenance of the entire HPC (hardware, hardware components, software, equipment and accessories supplied by the vendor) at the place of installation of the equipment.
- 18.3 During the warranty period, the equipment should be repaired / replaced within three days of reporting of the defect. In case of vendor failing it, a standby arrangement should be provided till the equipment is repaired. The rate of compensation for delay in repaired/rectified the system within three days is 0.5% per week of the entire AMC cost.
- 18.4 The vendor shall be fully responsible for the manufacturer's warranty for all equipment, accessories, spare parts etc. against any defects arising from design, material, manufacturing, workmanship, or any act or omission of the manufacturer / vendor or any defect that may develop under normal use of supplied equipment during the warranty period.
- 18.5 The vendor shall also be responsible to ensure adequate regular supply of spare parts for a minimum period of 5 years after the expiry of the warranty period under their annual maintenance and repairs rate contract or otherwise.
- 18.6 Warranty shall not become void even if NESAC buys any other supplemental hardware from a third party and installs it with/in these machines. However, the warranty of the OEM will not apply to such hardware items installed.
- 18.7 If the bidder is not the OEM for the brand quoted, the warranty for the hardware / software shall be provided from the OEM.
- 18.8 To fulfill the guarantee conditions outlined in clause 5.1 to 5.7 above, the Contractor shall, at the option of the Purchaser, furnish a Bank Guarantee (as prescribed by the Purchaser) from a Bank approved by the Purchaser for an amount equivalent to 10% of the value of the contract along with first shipment documents. On the performance and completion of the contract in all respects, the Bank Guarantee will be returned to the Contractor without any interest.

19.0 Delivery Terms:

- 19.1 Delivery shall be done within maximum 8 weeks from the date of issue of purchase order.
- 19.2 All the items shall be packed nicely as per the industry standard packing procedure.
- 19.3 Safety and insurance of the material during shipment and/or transportation shall be the responsibility of the vendor. However, this will not be applicable wherever NESAC transports the material on its own.
- 19.4 The vendor shall install and operationalise the instruments at NESAC within 4 weeks from the date of receipt of the material at NESAC.

20.0 Force Majeure

Should a part or whole of systems covered by this order be delayed in delivery due to reasons of Force Majeure which shall include lock-outs, strikes, riots, civil commotions, fire accidents, acts of God and war stoppage of deliveries by Government; refusal of non-receipt of import license for import items, the delivery period referred in their order shall be extended by a period(s) not in excess of duration of such force majeure. Each party undertakes to advise the other as soon as it becomes aware of the circumstances of such force majeure, so that actions under the provisions of this order can be mutually reviewed and agreed upon between the tenderer and NESAC. If the force majeure condition extends over a period of two months both the parties of the order shall mutually discuss and arrive at an agreement for continuation or termination of the contract.

21.0 TECHNICAL SPECIFICATION (TS) – (Bill of Materials- BoM must be attached)

i. ServerNode as Compute Node :Qty –4

Item	Specification
	Compute Node
Processor	2 x Intel Xeon E5-2630 v4.22 altz, 25M Cache, 10 Core CPU or equivalent higher
Chipset	Latest OEM chipset supporting an optimized for the above processor or equivalent higher
Memory	RAM (Min/Max): 64GB RDIMM, 2133 MT/s, Dual Rank, x8 Data Width and upgradable up to 384 GB
Hard Disk Drives	2 x 1TB 2.5 inch 7.2K RPM, 6Gbps NLSAS Hot Plug Hard Drive
HDD bays	HDD bays supporting SAS, SATA, SSD drives (Maximum HDD Support : 8 x 2.5”HDD or 4 x 3.5” HDD)
Optical Drive	Internal DVD-ROM drive
I/O slots	Up to 2 x PCIe 3.0 slots
RAID levels	Support for RAID 0, 1 and 5
Graphics Controller	Integrated Graphics with at least 16MB Video Memory
Raid Controller	Integrated RAID Controller
Server management	OEM embedded controller with IPMI 2.0 compliance and Server Management Tool from same OEM or higher equivalent
Ports	At least 2 USB 2.0 ports
Power Supplies	Dual, Hot-plug, Redundant Power Supply (1+1), 550W
Network Interface	1 x On-Board LOM 1GBE (Dual Port for Towers, Quad Port for Racks)
Industry Standard support	User-selectable power cap (subsystems throttle to maintain the specified power cap), ACPI 3.0 Compliant, PCI 2.3 compliant, PXE and WOL Support, IPv4 and IPv6 support
Industry Standard support	OS Support: Microsoft Windows Server® 2008/2012 SP2, x86/x64 (x64 includes Hyper-V®)
	Microsoft Windows Server 2008/2012 R2, x64 (includes Hyper-V)
	Novell® SUSE® Linux Enterprise Server
	Red Hat® Enterprise Linux
	VMware vSphere
	The server OEM must be ISO-14001
Form Factor	1U/2U Server with all necessary rail kits
Warranty	3 years onsite warranty by OEM

ii. **InfiniBand Switch , InfiniBand cards & Cluster Management Software : Qty-1**

<p>InfiniBand Switch & Cards</p>	<p>18 Port FDR InfiniBand Switch (Mellanox) with 3 years onsite warranty by OEM</p> <p>18 FDR (56Gb/s) ports in a 1U switch 2Tb/s switching capacity FDR/FDR10 support for Forward Error Correction (FEC) IBTA Specification 1.3 and 1.2.1 compliant Quality of Service enforcement Port Mirroring** Adaptive routing** Congestion control** Up to 8 multiple switch partitions** InfiniBand to InfiniBand routing** Redundant power supplies and fan drawers</p> <p>MANAGEMENT Integrated subnet manager agent (up to 648 nodes) Fast and efficient fabric bring-up Comprehensive chassis management API for 3rd party integration Intuitive CLI and GUI for easy access</p>
	<p>Mellanox FDR Cards for the Master & Compute Nodes Qty – 11 (Connect X ®-3 VPI single port) (56Gb/s) with cables & 3 yrs. warranty</p> <p>(7 Nos. for Existing IBM Servers & 4 nos. for New Servers)</p>
<p>Cluster Management Software</p>	<p>EITHER</p> <p>a) supply of 4 additional licenses of Cluster management software for connecting 4 New Compute Nodes with Cluster management Software, workload management tool and scheduler</p> <p>OR</p> <p>b) Open Source Cluster Management Software is to be installed and the entire cluster [1 Master & 10 (6 + 4) Compute Nodes] needs to be re-configured with the following :</p> <ol style="list-style-type: none"> 1. Cluster Management 2. MPI Library 3. GPU & Co-processor Scheduling 4. Workload Management 5. Application Integration 6. Web Based Cluster Health Monitoring <p>Vendor needs to quote one of the above; quotes received from the vendors for any one of the above shall be treated as equivalent with respect to technical and price.</p>

iii. **Upgradation of Existing EMC VNXe 3150 storage :**

Storage Up gradation	<p>Upgradation of Existing EMC VNXe 3150 storage from existing 12 TB (6 x 2TB) NL SAS (RAW) to 20 TB NL SAS (Usable) on RAID 5 with the below requirements :</p> <ul style="list-style-type: none"> - 12 x 2TB 7200RPM NL-SAS 3.5 DRIVE UPG - 1 x 2 C13 POWER CORDS W/IN6SA3 PLUG 250V 10A - 1 x Drive Enclosure With 12 X 3.5 INCH DRIVE SLOTS
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22.0 SERVICES

Sl. No.	Installation & commissioning - Specifications
i.	<p>Installation of additional license of IBM Platform HPC for 4 Nos. of New Servers (Compute Nodes) that needs to be added in the existing setup OR Open Source Cluster Management Software is to be installed and the entire cluster needs to be re-configured with the following:</p> <ol style="list-style-type: none"> 1. Cluster Management 2. MPI Library 3. GPU & Co-processor Scheduling 4. Workload Management 5. Application Integration 6. Web Based Cluster Health Monitoring
ii.	System installation, commissioning is the responsibility of the vendor and OEM
iii.	HPCC Configuration using the new and existing setup
iv.	It is the responsibility of OEM /Vendor to resolve any performance related issues
v.	At the time of installation and commissioning of the configuration if it is found that some additional hardware accessories or software items with licenses are required to complete the configuration to meet the operational requirement of the configuration which were not included in the vendor's original list of deliverables then vendor is required to supply such items to ensure the completeness of the configuration at no extra cost to NE-SAC . Vendor should ensure completeness of the list of deliverables in the offer to avoid such discovery during installation
vi.	In case any subsystem requires power sourcing which is different from the standard options, vendor shall indicate the power requirement for such subsystems clearly
vii.	Vendor shall provide site-planning guide for all the subsystems quoted
viii.	Maintenance of High Performance Computing Cluster for 3 years
ix.	The vendor must mandatorily quote for the post-warranty comprehensive annual maintenance contract (AMC) charges for the total solution/ system on annual basis for a period for the next 3 years after completion of initial three years warranty. The post warranty support contract will be extended only after satisfactory performance by the vendor during the warranty period.

23.0 Others

Sl. No.	Compliance - Specifications
i.	All the hardware specifications mentioned in this tender document are the required minimum, however higher or better specifications would be preferable.
ii	Component furnished shall be complete in every respect with all mountings, fittings, fixtures and standard accessories normally provided with such components and/or needed for erection, completion and safe operation of the components as required by applicable codes though they may not have been specifically detailed in the technical specification, unless included in the list of exclusions. All similar standard components/parts of similar standard components provided shall be inter-changeable with one another
iii	The methodology of cabling and installation work to be adopted to ensure minimum damage to the existing structure of the building. Any damage to the existing flooring/walls/paint etc. shall be rectified by the selected bidder
iv	The selected bidder shall be responsible for providing all materials, components, and services, specified or otherwise, which are required to fulfill the intent of ensuring operability, maintainability, and reliability of the complete component covered under this specification within his quoted price. This work shall be in compliance with all applicable standards, statutory regulations and safety requirements in force of the date of award of this contract.
v	The selected bidder shall also be responsible for deputing qualified personnel for installation, testing, commissioning and other services under his scope of work as per this specification. All required tools for completing the scope of work as per the specification is also the responsibility of the selected bidder.
vi	The bidder should have service facility setup in Guwahati or Shillong at least for last 3 years , supporting documents like trade license/municipality registration certificate approved by respective authorities should be enclosed with their bid.
vii	The selected bidder shall perform the services and carry out its obligations with all due diligence, efficiency and economy in accordance with generally accepted professional techniques and practices and shall observe sound management practices and employ appropriate advance technology and safe methods
viii	The selected bidder shall furnish complete, well-fabricated and reliably operating and secure systems to NE-SAC. Design and selection of component and software shall be consistent with the requirements of long term trouble free operation with highest degree of reliability and maintainability. All components shall be constructed to operate safely without undue heating, vibration, wear, corrosion, electromagnetic interference or similar problems and all software shall be proven, tested and reliable. The necessary compliance document and test reports shall be provided
ix	All interconnecting cables required to connect the communication component shall be furnished. All cables shall be fully assembled connector pre-terminated and factory tested as part of overall system checkout.
	Cables shall be neatly & properly tied up and dressed using appropriate cable hangers and Velcro bands. All the cables, connectors, sockets, panel's etc. shall be labeled for identification purpose
x	All the cabling should adhere to the International Standard
xi	All component, accessories and cables supplied under this contract shall be in accordance with the latest applicable recommendations, regulations and standards
xii	Cable (Cat 6) and cable accessories (Cat6) UL Listed and verified

xiii	For parameters not covered under the above codes, internationally acceptable standards shall be accepted. The selected bidder shall furnish a complete list of all standards and codes under which his component is designed, manufactured and assembled along with the bids
xiii	Functionality/accessibility of each component of the system and the system as a whole should be demonstrated to the satisfaction of NE-SAC
xiv	Reliable over voltage and over current protection circuits shall be provided in the component power supply units. The component power supply units shall be self protecting and also protect connected component's against interference, noise, voltage dips and surges & impulses that may be present in the mains power supply sources. Component shall be guaranteed for operation over the following AC power range to be made available by NE-SAC 240V AC +/-10%, 50 Hz +/- 5%

24.0 COMPLIANCE / DEVIATION

Specification Required	Specification Quoted With make/model	Technical Compliance		Deviation
		Yes	No	

25.0 BID FORM

A) TECHNICAL BID

(To be Included in technical Bid Envelope)

Date:

To:

The Administrative Officer
North Eastern Space
Applications Centre Government
of India, Department of Space
Umiam – 793103, Meghalaya

Ref.: NIT No.

Having examined the Bidding Documents, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to HPC Infrastructure, in conformity with the said Bidding documents.

We undertake, if our Bid is accepted, to deliver, install and commission the solution in accordance with the delivery schedule specified in the Schedule of requirements.

If our Bid is accepted, we will obtain the guarantee of a Bank in a sum equivalent to 10 percent of the Contract price for the due performance of the Contract, in the form prescribed by the bank.

We agree to abide by the Bid and the rates quoted therein for the orders awarded by the NESAC up to the period prescribed in the Bid, which shall remain binding upon us.

Until a formal contract is prepared and executed, this Bid, together with your written acceptance thereof and your notification of award, shall constitute a binding Contract between us.

We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act, 1988".

We understand that you are not bound to accept the lowest or any Bid you may receive.

Dated this day of 2016

Signature
(In the Capacity of)

Name:

Duly authorized to sign the Bid for and on behalf of

B) PRICEBID

(To be Included in Price Bid Envelope)

Date:

To:

The Administrative Officer
North Eastern Space
Applications Centre Government
of India, Department of Space
Umiam – 793103, Meghalaya

Ref.: NIT No.

Having examined the Bidding Documents, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to supply and deliver the captioned solution, in conformity with the said Bidding documents as may be ascertained in accordance with the schedule of Prices attached herewith and made part of this Bid.

We undertake, if our Bid is accepted, to deliver, install and commission the solution in accordance with the delivery schedule specified in the Schedule of requirements.

If our Bid is accepted, we will obtain the guarantee of a Bank in a sum equivalent to 10 percent of the Contract price for the due performance of the Contract, in the form prescribed by the bank.

We agree to abide by the Bid and the rates quoted therein for the orders awarded by the NESAC up to the period prescribed in the Bid, which shall remain binding upon us.

Until a formal contract is prepared and executed, this Bid, together with your written acceptance thereof and your notification of award, shall constitute a binding Contract between us.

We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act, 1988".

We understand that you are not bound to accept the lowest or any Bid you may receive.

Dated this Day of2016

Signature
(In the Capacity of)

Name:

Duly authorized to sign the Bid for and on behalf of

C) PERFORMANCE BANKGUARANTEE

(CLAUSE 20 (F) OF
P.0050-B refers)

Bank Guarantee No. Date:

Whereas M/s.

.....
(hereinafter called the Contractors) have entered into a
contract with
.....(hereinafter called the purchaser)
being contract No.....dated(of
the purchase, for the supply of Stores for order
value Rs.....or
equivalent foreign currency.

And whereas under the terms of contract, the contractor is to furnish the purchaser with a Bank Guarantee in the amount of ten percent (10%) of the total of the contract price for the due performance of the General terms and conditions of this order.

And whereas the contractor has requested us (name of the Bank) having its registered office.....at to guarantee the due payment by the contractor of the aforesaid amount to the purchaser.

Not we (name of the Bank) hereby unequivocally and unconditionally to pay, within 48 hours, on demand, in writing from the purchaser or any officer authorized by at in this behalf and without demut, any amount upto and not exceed Rs.....(in words)

.....
or equivalent foreign currency to the purchase on behalf of the contractors.

This guarantee shall be valid and binding on us (name of the bank) for a period of 12 months from the date of which the purchaser puts the stores into operation and shall not be terminable on affected by notice of any change in the constitution of the bank of the firm of contractors or by any other reason whatsoever and our (name of the bank) liability hereunder shall not be impaired or discharged by any extension of time or variation or alteration made, given conceded, agreed by with or without knowledge or consent, by or between the parties to the said written contract.

Our (name of the Bank) liability under the guarantee is restricted to Rs..... (In words)

only / or equivalent foreign currency. Our guarantee shall remain in force till the expire of 12 (twelve) months from the date on which the purchaser formally accepted the said equipment. Unless a suite or action to enforce a claim under this guarantee is filed against us within six months from the expire of the said 12 months all the rights of the purchaser under this guarantee shall be forfeited and we shall be relieved and discharged from all liability there under. In witness whereof we the (name of the bank) have executed this.

This the _____
_____ day of _____ 201

WITNESS
For the (Name of the Bank)

Signed

D) MANUFACTURER'S AUTHORISATIONFORMAT

Ref. No.

Date:

To,

The Administrative Officer
North Eastern Space
Applications Centre Government
of India, Department of Space
Umiam – 793103, Meghalaya

Whereas..... (Name and Address of the Manufacturer) who are establishedand manufacturers of (Name/description of the products), having production facilities at.....(Address of factory) do hereby authorize M/s.....(Name and Address of the Bidder) to submit a bid, and subsequently negotiate and sign the Contract with you against NIT No..... dtd..... for the above products manufactured by us, for the supply requirements of the above invitation of bids.

Name :

(In the capacityof)

(Duly authorized to sign the authorization on and behalfof)

Signature:

Dated this..... day of.....2016

Note: *This letter of authority must be on the letterhead of the concerned manufacturer and must be signed by a competent person*

E) ORGANIZATIONAL PROFILE WITH SIMILAR PAST EXPERIENCE

(To be included in the Technical Bid)

1.	Constitution: Proprietary Partnership Private Ltd. Public Ltd.			
2.	Established since :			
3.	Address of the Registered Office			
4.	Category Software Producer/ Developer (Principal) Hardware Manufacturer (Principal) System Integrator/ Solution Provider Any Other			
5.	If Consortium, then please specify: name of the members			
6.	Name of Proprietor/ partners/ Directors			
7.	Number of Engineers			
8.	Number of total Employees			
9.	Some of Solution being offered / Sold so			
	Purchaser, with full address and details of contact person (phone, Fax and E-	Item Description	Total Order Value	Whether Completed/ Under process

Note: Please support the above facts with documentary evidence.

Signature of the

Bidder: Name:

F) SERVICE SUPPORT DETAILS

Name of the Bidder :

Name and Address of Service Centre	Name of Contact Person	i. TelephoneNo ii. Fax No iii. MailID	Information on Service Support Facilities

Signature of the

Bidder: Name:

भारत सरकार/GOVERNMENT OF INDIA
अंतरिक्ष विभाग/DEPARTMENT OF SPACE
उत्तर-पूर्वी अंतरिक्ष उपयोग केंद्र/NORTH EASTERN SPACE APPLICATIONS CENTRE
उमियम/UMIAM-793103, मेघालय/MEGHALAYA

26.0 PRICE BID

Sl. No.	Item Description	Qty	Unit Price (₹)	Tax (VAT/ CST)	Service Tax	Total Price inclusive of tax (₹)
1	Rack Server	04				
2	Red Hat entp. Linux for Compute Node	04				
3	18 Port Infiniband Switch	01				
4	Infiniband Card	11				
5	Up gradation of Existing EMC VNXe 3150 12 TB NL SAS to 24 TB NL SAS	01				
6	<p>Cluster Management Software & Configuration</p> <p>Either</p> <p>a) supply of 4 additional licenses of Cluster management software for connecting 4 New Compute Nodes with Cluster management Software, workload management tool and scheduler</p> <p>OR</p> <p>b) Open Source Cluster Management Software is to be installed and the entire cluster [1 Master & 10 (6 + 4) Compute Nodes] needs to be re-configured with the following:</p> <ol style="list-style-type: none"> 1. Cluster Management 2. MPI Library 3. GPU & Co-processor Scheduling 4. Workload Management 5. Application Integration 6. Web Based Cluster Health Monitoring <p>Vendor needs to quote one of the above; quotes received from the vendors for any one of the above shall be treated as equivalent with respect to technical and price.</p>	1				
7	Installation & commission which includes 3 days onsite training after the successful installation of entire HPC	1				

Note :

The Bidder can check the existing infrastructure and quote the price of software license accordingly. If additional license is required the bidder has to quote accordingly.