

Tender Ref. No.: SNDTWU/PMUSHA/PURCHASE/2025-26/ 149

E- TENDER DOCUMENT

FOR

SUPPLY & INSTALLATION OF HIGH PERFORMANCE COMPUTING CLUSTER

AT

USHA MITTAL INSTITUTE OF TECHNOLOGY SANTACRUZ (W)

A constituent engineering college of the

SHREEMATI NATHIBAI DAMODAR THACKERSEY

WOMEN'S UNIVERSITY

1, Nathibai Thackersey Road, Mumbai-400 020

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# E-TENDER DOCUMENT PREPARED FOR procurement, installation and commissioning of the High Performance Computing Cluster

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### TENDER SCHEDULE

## PROCUREMENT, INSTALLATION AND COMMISSIONING OF THE HIGH PERFORMANCE COMPUTING CLUSTER

Sr. No.	Critical Activities	Date & Time
1.	Publish Date	30th October 2025, 12.00 am.
2.	Document download/ Sale Date	30th October 2025, 12.00 am.
3.	Bid Preparation	30th October 2025, At 12.00 am.
4.	Pre bid meeting	3 <sup>rd</sup> November 2025 at 12.00 noon at the Office of the Principal, Usha Mittal Institute of Technology, Santacruz (W), Mumbai-400 049. Interested bidders may visit for the discussions.
5.	End Date & Time Bid Submission	19th November 2025 at 6.00 pm
6.	Bid Opening	21st November 2025, 12.30 noon at the SNDT Women's University, Churchgate, Mumbai.

Tender Ref. No.: PM-USHA/ 2025-26/ 1449

30th October 2025

E-Tender Notice
for the procurement, installation and commissioning of the High
Performance Computing Cluster
required to
SNDT Women's University's
Usha Mittal Institute of Technology, Mumbai

SNDT Women's University invites e-tender for the selection of suppliers for the procurement, installation and commissioning of the High Performance Computing Cluster from interested and qualified suppliers, dealers and manufacturers. For the detailed tender document interested bidder must visit-https://mahatenders.gov.in.

The filled in tender must be submitted on-line as per the schedule of activities declared separately. Any extension of tender, corrigendum or change in schedule will not be published in the newspaper. It will be published only at the web portal https://mahatenders.gov.in

Dr. Vilas Nandavadekar Registrar

SNDT Women's University

### DISCLAIMER

### Important Instructions Regarding the E-Tendering Process

- 1. A detailed schedule of the various activities related to the e-tendering process is provided in this e-tender document under the section titled "Tender Schedule."
- SNDT Women's University shall not be responsible for any loss or inconvenience arising from the temporary unavailability of the website due to technical issues at any point of time.
- Bidders are advised to strictly adhere to the schedule of the e-tendering process and complete all related activities well in advance to avoid any last-minute difficulties caused by unforeseen technical problems, if any.
- 4. SNDT Women's University shall not be held liable for any incomplete submission or failure of the bidder's e-tendering activities due to technical errors, website failures, or connectivity issues. Such instances shall not be subject to appeal, arbitration, or legal proceedings in any court of law.

### Instructions for filling the E-Tender

### Invitation for E-Tender

The Registrar, SNDT Women's University, Mumbai, invites e-tenders for the procurement, installation, and commissioning of a High Performance Computing (HPC) Cluster for the Usha Mittal Institute of Technology (UMIT), Mumbai.

### Procedure for Submission of Tender

1. Registration on the Portal:

All eligible and interested bidders are required to register and enroll on the Government of Maharashtra e-Tendering Portal at <a href="https://mahatenders.gov.in">https://mahatenders.gov.in</a> before downloading the tender documents and participating in the e-tendering process.

2. Submission Mode:

The tender shall be submitted online only, under a two-bid system, consisting of:

- Technical Bid
- Financial Bid
- 1. Bill of Quantity (BOQ):

The BOQ shall be submitted in the prescribed Excel format and must be inclusive of all applicable taxes.

2. Specifications:

The detailed technical specifications of the High Performance Computing Cluster required for the HPC Laboratory are provided separately in this document.

#### Technical Bid

- The bidder shall scan and upload all required documents online under the Technical Bid section. The first page of the Technical Bid must compulsorily include the cover page listing all enclosed documents.
- All uploaded documents must be valid, legible, and self-attested by the bidder. Nonsubmission of any mandatory document may result in rejection of the Technical Bid.

The Registrar
SNDT Women's University
Churchgate, Mumbai

- 3. If a bidder fails to upload the essential documents within the stipulated time on the web portal, the bid shall be rejected without further consideration.
- 4. Each document submitted online, must be self-attested by the bidder.
- The documents will be verified at the time of opening of the Technical Bid. Prospective bidders are expected to remain present during the Technical Bid opening meeting, which will be conducted in a transparent manner.

### Pre-requisites:

- a. Minimum turnover (average of earlier 5 financial years): Rs. 42.50 Lakhs
- b. Experience of supplying at least three educational institutions/University.

### 3. Financial Bid:

A technical bid shall be opened first in the presence of the committee members and the bidders. The financial bid of the bidders, who had qualified all the pre-requisites of the technical bid requirements will only be considered for the participation in the financial bid. Financial bid should be submitted online by the Bidder in the form of BOQ excel sheet made available at the web portal – <a href="https://mahatenders.gov.in">https://mahatenders.gov.in</a>.

Bidders are requested to fill up the column of rate per unit offered by them for supplying computer tables as per the specification mentioned in e tender.

Bidder should have the valid digital signature certificate (DSC) obtained from any Certifying Authority. Bidders are requested to go through the documents, terms and conditions mentioned in e-tender before the submission of tender documents on the e-portal.

It is mandatory to follow the timeline in respect of tender schedule published by the University. All the online activities are time tracked and the electronic tendering system enforces time-locks that ensure that no activity or transaction should take place outside the start and end dates and time as declared in the tender schedule.

The rates (including all taxes) should be quoted for the specifications of the HPC Cluster mentioned in e tender.

The University reserves the right to decide whether to open or not open the technical bid and/or the financial bid if such a situation arises due to unavoidable circumstances.

Appropriate communication with all eligible bidders shall be done by the University. The objection of any bidder shall not be entertained on any ground what so ever it may be regarding this issue.

- 1. The rate quoted in BOQ form must be inclusive of GST and all eligible taxes applicable as per prevailing rules and regulations.
- 2. The University reserved the right to accept/cancel any or all tenders without assigning any reason thereof.
- The accepted tender rates will stand good till the end of the agreement period and no hike in the said accepted rates will be entertained during the period of the agreement.

### Please note-

### **Evaluation of Bids**

### 1. Opening of Technical Bid:

The Technical Bid shall be opened first, and the evaluation will be carried out strictly in accordance with the technical requirements and eligibility criteria specified in this etender document.

### 2. Qualification for Financial Bid:

It is mandatory for bidders to fulfill all pre-requisite and qualifying conditions mentioned in the tender document to become eligible for participation in the Financial Bid opening process.

Only those bidders who qualify in the Technical Bid evaluation shall be shortlisted and considered for the Financial Bid stage.

### 3. University's Rights:

The University reserves the right to accept or reject any service, product, or material that does not conform to the specifications or terms and conditions laid down in the tender document. Any payment corresponding to such defective or non-conforming services shall be deducted from the bills of the service provider.

### 4. Rejection of Incomplete Bids:

Tenders that are incomplete, unsigned, unclear, unreadable, or submitted partially shall be summarily rejected without any further correspondence or consideration.

## Specification of High Performance Computing Cluster required at Usha Mittal Institute of Technology, Mumbai.

Sr.	Details of Store Material (Without Make) & Details of Required	Qty
No.	Technical Specifications	
1.	Master Node	2
	Dual 12 Cores CPU's each of 2.40 GHz and min.	
	2.5 MB Cache for each physical core.	
	Minimum 128 GB DDR5 of highest frequency as	
	supported by the above CPU's. RAM should be	
	scalable to atleast 512 GB in 100% Balanced	
	config. without discarding the current 128 GB of	
	RAM being quoted	
	• 2x 1.92 TB SATA 2.5" SSD (in H/W RAID – 1). RAID	
	Card shall support H/W RAID Levels 0, 1, 5, 6, 10	
	with atleast 1 GB of Cache.	
	System shall have minimum 6x PCI Express Gen	
	5.0 Slots (Min. 5x PCle 5.0 x16 Slots).	
	• Min. 2x USB, 1x VGA, 1x dedicated RJ45 remote	
	management port.	
	Chassis should have minimum 800W (1+1)	
	Redundant Platinum Level Certified power	
i i	supplies and 8x 3.5"/2.5" Hot-Swap Drive Bays.	
-	• Max. 2U Rack Server	
4	Compute Node	
4	Dual 32 Cores CPU's each with min. 2.50 GHz,	
	60M Cache.	
	Min. 512 GB of DDR5 RAM of highest frequency	
	as supported by the CPU. RAM should be scalable	
1	to atleast 2 TB in 100% balanced config. without	
(	discarding the current 512 GB RAM being quoted.	
4	Single 1.92 TB SATA 2.5" SSD	
4	Min. 2x USB 3.2 Gen1, 1x VGA, 1x dedicated RJ45	

	ramata managamani na d	
Les .	remote management port.	
	<ul> <li>Min. 2x USB, 1x VGA, 1x dedicated RJ45 remote</li> </ul>	
	management port.	
	Chassis should have minimum 800W (1+1)	
	Redundant Platinum Level Certified power	
	supplies and 8x 3.5"/2.5" Hot-Swap Drive Bays.	
	<ul> <li>Max 2U Rack Server with 800W Redundant</li> </ul>	
	Platinum or above Level Certified Power Supplies.	¢.
2.	GPU Accelerators	4
	Specifications:	
	The GPU server must be pre-configured with a	
	minimum of 4 GPU cards, and must support scalability	
	to at least 8 GPUs within the same chassis without	
	architectural modification.	
	Technical specifications of each GPU are as follows.	
	<ul> <li>Memory = 32 GB GDDR6</li> </ul>	
	<ul> <li>Memory Interface = 256 – Bit</li> </ul>	
	<ul> <li>Memory Bandwidth = 576 GB/sec,</li> </ul>	
	<ul> <li>No. of Cores = Min. 12,000</li> </ul>	
	Single Precision = 65.0 TFlops Performance	
	<ul> <li>System Interface = PCle 4.0 x16</li> </ul>	
	Total Board Power = 250 Watts	*
	Form Factor = Dual Width Active Cooling	
	GPU Server specifications: Dual 32 Cores CPU's	
	each with min. 2.50 GHz, 60M Cache. Min. 512	
	GB of DDR5 RAM of highest frequency	
	as supported by the CPU. RAM should be	
	scalable to atleast 2 TB in 100% balanced config.	
	Without discarding the current 512 GB RAM	
	being quoted. Single 1.92 TB SATA 2.5" SSD. Min.	
	2x USB 3.2 Gen1, 1x VGA, 1x dedicated RJ45,	
	remote management port.	
-	A.	

Single – Controller NAS Storage with the minimum specifications as below.

- 500 TB RAW Storage
- Storage shall support both Block (iSCSI, FCP, SRP)
   and File (SMB, NFS, FTP, AFP) Protocols out of the box.
- Host Interface :- 2x 1G RJ45, 2x 10G RJ45
- Controller shall support RAID Levels 0, 1, 0+1, 5,
- 6, 50 & 60 with max. 24x SAS/SATA LFF/SFF bays in 4U Form Factor
- Box should support SSD Caching (optional upgrade)
- Box shall have built-in snapshot with rollback feature.
- Box shall have WebUI for setup and configuration
- Controller shall have minimum 24 CPU Cores with
   512 GB of Memory

### Primary Network Switch

Switch shall have the features as below.

- Minimum 12x 100M/1G/2.5G/5G/10G Base-T
- Ports, 2x 10G SFP+ Ports, 2x 1G/10G Base-T/SFP+ combo ports
- Switching Capacity = 320 Gbps
- Packet Forwarding Rate = 238.08 Mpps
- MAC Address Table = Upto 32K entries per device
- All required cables to be bundled

### Secondary Network Switch

Minimum 24x 10/100/1000 Base-T RJ45 Ports Unmanaged,

Ethernet Switch with all required cables

Ethernet Switch with all required cables

Advanced Features: Default software features

	include: Snapshot: 64 per source volume, 128 per	
	system Remote replication (file-level)Optional	
	features: SSD Cache Clients Supported: Windows,	
	MAC OS, Linux, Free BSD, Solaris Protocol Support:	
	File-level protocol: SMB, NFS, FTP, AFP Block-level	
	protocol: iSCSI, FCP, SRP" Ports: Storage should be	
	configured with minimum 2 Number of USB ports	
4.	Server Rack	1
	Server Rack with the below features.	
	• U Size = 42U	
	Dimensions = 800mm (Width) x 1200mm (Depth)	
	Doors = Front Perforated Door, Rear Perforated Split Door	
	Extra Features = Side Panels, Castors, Levelling feet	
	• PDU's = 02 qty. of Vertical PDU's each of 22KW,32A, 230V/400V	
	with (18) IEC C13 and (6) IEC C19 Power Sockets	
	Server Rack shall also include top mounted self-	
	cooling exhaust fan.	
5.	High-Performance Computing OS (Optimized Linux	2
	Distribution)	
	Specifications:	
	<ul> <li>Enterprise-grade Linux OS optimized for HPC,</li> </ul>	
	<ul> <li>Long-Term Support (LTS) Version (Compatible with</li> </ul>	
	Resource / Cluster Management Software), Preferred	
	Ubuntu HPC OS.	
6.	Cluster resource management software ( Job Scheduler like	6
	Slurm, ):	
	Specifications:	
	Must support dynamic resource allocation and Integrates with	
	MPI and GPU resources,	
	Multi-cluster scheduling support	
	Cluster Management Software :	
er 	The HPC Cluster being quoted should have a	
	G Thrana allegia lideo d	

	0	bundled	
		Cluster management software with the below	
		set of features :-	
	•	HPC Cluster Suite	×
<u> </u>	•	Scalable cluster deployment and management	
	•	Workload manager	
	•	Dynamic Workload manager change	
	•	Shared Home	
	•	General FOSS compilers , libraries, parallel	
		libraries , scientific Libraries	
	•	Graphical Monitoring	
	•	Simple and easy to use GUI web based	
		interface for targeted workload management.	
		High Availability	1
		Support & Maintenance	
		Updates and bug fixes	
		Infiniband Support,	
	•	More Installation Options - Install to Hard Disk,	
		run stateless (Diskless) & run diskless with a bit	
		of state (Statelite)	
	•	Built in Automatic discovery - No need to	
		power on one machine at a time to discover.	
	•	Nodes that fail can be replaced and back in	
		action by just powering them on.	
	•	Dynamic provisioning of nodes	
7.	CUDA	& Open MPI (Message Passing Interface) Libraries (For	1
	Parall	el Computing & GPU Optimization)	
	Specif	fications:	
	•	CUDA for parallel computing platform and API model for	
		using GPUs.	
	•	MPI for distributed computing, high-performance	
		implementation of the MPI standard	

 Scalability for large datasets
 All software must be open-source and configured to run seamlessly on the cluster hardware

To ensure effective implementation and seamless functionality, it is necessary to procure the entire HPC cluster as a **single turnkey solution** from a qualified vendor. This includes not only the supply of hardware components—such as the master node, compute nodes, GPU accelerators, storage systems, and networking equipment—but also the installation and configuration of all required software, including the HPC-optimized Linux operating system, resource manager (e.g., Slurm), MPI libraries (e.g., OpenMPI with CUDA), and domain-specific applications (e.g., TensorFlow, PyTorch, OpenFOAM, and QGIS). The selected vendor shall be responsible for the **end-to-end setup** of the HPC infrastructure, encompassing: Supply and delivery of all listed components, Installation and configuration of the full software stack, Hardware-software integration and system optimization, Initial testing, bench marking, and validation of cluster performance, Basic training for administrators and end-users, Provision of system documentation and post-installation technical support.

### PRE-BID MEETING MEETING FOR GETTING ANY CLARIFICATION ABOUT VARIOUS CONDITIONS MENTIONED IN THE TENDER DOCUMENT

- The pre-bid meeting shall be held at 12.00 noon on 3<sup>rd</sup> November 2025 at the Usha Mittal Institute of Technology, Mumbai, a conducted college of the SNDT Women's University, Mumbai located at the Juhu Campus of SNDT Women's University, Santacruz (W), Mumbai. for sorting out the queries (if any) for the prospective bidders as per the schedule declared in the e tender.
- 2) The representatives of the bidders may attend the pre-bid meeting at their own cost. The purpose of the pre-bid meeting is to provide a forum for the bidders to clarify their doubts / seek clarification or additional information necessary for them before submission of documents in respect of e tender.
- 3) All inquiries from the bidders related to e-tender must be discussed during the prebid meeting.
- 4) Clarification of all queries will be given during the pre-bid meeting. No separate communication shall be done in this regard. Any modifications to this tender document after the pre-bid meeting shall be uploaded on the e-portal in the form of corrigendum.
- 5) Any such corrigendum shall be deemed to be incorporated into this Tender. Date for the submission of documents shall be part of the corrigendum. It will get published on the web-portal <a href="https://mahatenders.gov.in">https://mahatenders.gov.in</a>. No personal communications shall be carried out in this regard.

#### AMENDMENT OF BIDDING DOCUMENTS:

At any time prior to the deadline for the e-submission of bids, the University Authorities may for any reason, whether on its own initiative or in response to the clarification requested by bidders during the pre-bid meeting may modify, change, incorporate or delete certain terms and conditions in the bidding documents. Revised time schedule, (if required) as per the amendment shall be communicated to the prospective bidders through the web-portal <a href="https://mahatenders.gov.in">https://mahatenders.gov.in</a>.

The following points will be considered for short listing of bidders for the financial bid.

Company should be well conversant with supplying HPC Cluster for various organizations including the educational institutions etc. The average turnover of the organization for the last five years shall be Rs.50 Lakhs or above.

The bidder should participate as a single entity, no consortium or group of companies will be allowed. The service provider shall be the single point of contact with the university and shall be solely responsible for the execution and delivery of the work.

An affidavit shall be submitted mentioning that the bidder has never been blacklisted by any Government department /Government undertaking/ Public Sector Unit/ University/ Education Board /any other agency as per the details provided in the **Annexure-C**.

### General Terms and Conditions of the Tender

### 1. Earnest money deposit and thecost of tender:

Bidders are required to pay Rs. 50,000/-(Rs. Fifty Thousand only) towards the earnest money deposit (Refundable) and Rs.2,000/- (Rs. Two Thousand only) towards the tender fee(Non-Refundable) through the net banking on the e-tendering website.

### 2. Security Deposit:

Shortlisted bidder is designated as the service provider. After the decision in respect of the suppliers of the HPC Cluster, the decision will be communicated to the concerned vendor by Usha Mittal Institute of Technology, Mumbai.

3. Conditional E-tender shall be out rightly rejected.

### 4. Payment:

After the completion of the process to supply, installation, commissioning and adequate training, the payment shall be released on the recommendation of the Principal, Usha Mittal Institute of Technology, Mumbai.

### 5. Validity of Tender:

Tender offer must be valid for a period of a minimum of 120 days from the date of opening of the commercial/financial bid.

#### 6. Jurisdiction:

The court at Mumbai alone will have the jurisdiction to try any matter, dispute or reference between parties arising out of this tender /contract. The University reserves the right to accept or reject any or all the tenders from any or all the parties without assigning reason thereof.

### Technical Bid:

The following documents are required to be submitted on-line under technical bid.

The Company/Firm/Holding Company should have experience in respect of the supply of compute

There should be a valid copy of Company / Firm/ Holding Company Registration Certificate.

The bidder should provide audited balance sheets for the last five financial years.

Declaration Certificate regarding Clean Track Record on Company /Firm's letter head.

Valid copy of the GST Registration

Copy of the Permanent Account Number (PAN).

### Additional Terms and Conditions (ATC)

### 1. General Information and Guidelines

- a) The Tender Inviting Authority (TIA) SNDT Women's University, 1, N. Thackersey Marg, Mumbai. invites bids from eligible bidders as per the Scope of Work.
- b) The TIA reserves the right to extend the Term on mutually agreed terms at the sole discretion of the TIA, subject to any obligations under applicable law.
- c) All terms and conditions supplied by the bidders may be treated as contractually binding on the bidders, on the successful award of the assignment by the TIA based on this Bid document.
- d) No commitment of any kind, contractual or otherwise shall exist unless and until a formal written contract has been executed by or on behalf of the TIA. Any notification of preferred bidder status by the TIA shall not give rise to any enforceable rights by the bidder. The TIA may cancel this public procurement at any time prior to a formal written contract being executed by or on its behalf.
- e) This tender document supersedes and replaces any previous public documentation & communications, and the bidders should place no reliance on such communications.
- All figures of costs, project values and others should be mentioned in Indian Rupees only.
- g) Scope of Work: Supply and installation of INSTRUMENTS as per specification mentioned in Annexure E, at the following location -:
  - Usha Mittal Institute of Technology, SNDT Women's University, Juhu-Tara Road, Sir Vitthaldas Vidyavihar, Santacruz(W), Mumbai 400049

All required cost for supply and installation shall be borne by successful bidder.

- h) Validity of Bid: 180 days from opening of Technical Bid.
- i) The bidder shall quote for the product as per the requirements of the tender documents.
- j) The bidder should make provisions for all taxes, duties, charges and levies as applicable while supplying INSTRUMENTS.
- k) The prices, once offered, must remain fixed and must not change for any reason whatsoever within the period of the validity of the bid and the contract. No revision of the fee shall be made on account of any variations in costs of labour and equipment, currency exchange fluctuations with international currency or any other cost

- component affecting the total cost in fulfilling the obligations under the contract. A bid submitted with an adjustable price quotation or conditional bid shall be rejected as non-responsive.
- The prices quoted by bidder should be less than or equal to the estimated price mentioned in the tender. The bid will be rejected, if price quoted are found higher.
- m) All costs incurred due to delay of any sort, which is attributable to the bidder, shall be borne by the bidder.
- n) The Contract will be signed as per tender document, after selection of successful bidder. In lieu of the same, the successful bidder will have to execute an agreement on a non judicial stamp paper as per Stamp Act, 1958 (amended later) in favour of the SNDT Women's University, 1 N. Thackersey Marg, Mumbai.
- o) If the successful bidder fails to execute the agreement and if applicable, payment of Performance Security within the time specified or withdraws the tender or if the successful bidder is unable to undertake the contract, the Earnest Money Deposit of the successful bidder shall stand forfeited. Such bidder(s) will also be liable for all damages sustained by the TIA by reasons of breach of tender conditions. Such damages shall be assessed by the TIA whose decision shall be final.
- p) If the Bidder fails to supply the goods on account of Force Majeure, the contract for indented quantity stands cancelled between Bidder and SNDT Women's University, 1 N. Thackersey Marg, Mumbai.
- q) SNDT Women's University, 1 N. Thackersey Marg, Mumbai. will not be liable to any risk and cost, whatsoever, consequent upon such cancellation of the contract.
- r) Time is Essence for Delivery: The time or date for delivery of the Materials as stipulated in the Delivery Schedule is the essence of the contract and delivery must be completed not later than the time or date as specified.
- s) Any representation through a Dealer/ Distributor/Subsidiary/Consortium shall not be treated as OEM. Only OEM can file the representation for the clarification.
- t) Physical visits to the office of buyer will not be entertained. Representations and Objections will be answered only through Government e-Marketplace Window

### 2. Qualification Criteria for the Bidder:

The bidders shall fulfill all the following eligibility criteria independently, as on the date

SR	Parameters	Description	Supporting Documents
No		Sesonphon	Supporting Documents
1.	Experience	1.The bidder should be a Society/company	a Conv. of Cortification of
	Exponionio	registered under Societies act 1860 &	
		1950/ Indian Companies Act, 1956 or as	
		amended Partnership Firm/or	(,
		Proprietorship firm with their registered	
		office for the last Five (5) years.	OR
		2.The bidder must have functional office in	- regional anticiping
		Maharashtra with dedicated technical &	deed
		maintenance staff.	OR
. i			Shop Act Licenses
			As applicable
2.	Bidder	1.a) Bidder Minimum Average Annual Turn	1. Turnover
	Turnover – 3	Over (MAAT) in India in last three financial	Certificate of
	Yrs / OEM	years (2021-22, 2022-23, 2023-24) - Avg.	Bidder and OEM
	Turnover – 3	Turnover 42.50 Lakh.	from Chartered
	Yrs		Accountant with
		b) OEM Minimum Average Annual Turn	UDIN number.
		Over (MAAT) in India in last three financial	2. The Audited
		years (2021-22, 2022-23, 2023-24) - Avg.	Balance Sheet
		Turnover 340.00 Lakh.	and Profit & Loss
		2.Financial statement	statement of
		3. EMD in the form of Demand Draft should	bidder (2021-22,
		be submitted to the Office of Registrar,	
		SNDT Women's University, 1 N.	3. Any other
		Thackersey Marg, Mumbai within 3 days of	
		bid opening. Failure to submit the same	11 0
		shall be liable to Dis-Qualification in	o o o o o o o o o o o o o o o o o o o
		Technical Bid.	

3.	Bidder GST	The bidder must have in its name, a valid	
0.	Didder GOT		
		GST Registration Certificate & GST	
		Clearance certificate from Jan 2025 to	
		March 2025 by Department or certified by	Supporting Document
		Chartered Accountant with UDIN No.	71
		Bidder should be a registered GST	
		Supplier from Maharashtra FOR the same	
		products	
4.	Bidder	1.The bidder must submit Income Tax	
	Financial	Return (ITR) of AY (2021-22, 2022-23,	Supporting Document
	Standing	2023-24)	
		2.PAN	
5.	Non-Black	Undertaking on letterhead, regarding the	Undertaking for non-
	listing	firm has not been found guilty of	blacklisting on 500 Rs Stamp
		malpractice, misconduct or	and original Hard Copy of the
		blacklisted/debarred either by any	Bond Needs to be Submitted
		department Government of Maharashtra or	to the Office of Deputy
		by any local authority and any other state	Registrar Establishment
		government/Central Government	Section, First floor, Annexe
		Organizations in past 3 years.	Building, SNDT Women's
			University, 1 N. Thackersey
			Marg, Mumbai, within 3 days
			of the bid opening.
			Failure to submit the same
		9 9	shall be liable to Dis-
			Qualification in Technical Bid
			a difficult later

6.	Work	Bidder / OEM should have completed at	Copy of Work Order/CRAC
	Experience	least THREE similar HPC CLUSTER in the	and Client certificate signed
		past three years.	by a competent authority
		Similar Project shall mean the work	clearly stating the start and
		mentioned in the scope of work	end date of the project along
		The projects experience should be related	with the project cost.
		only to supply of INSTRUMENTS works	For experience, this criterion
		from Central / State Government	shall be considered
		Organization	
		/PSU / Local Bodies in last three financial	
		years.	
7.	Annexures	All the annexures to be submitted on	A, B, C, D, E, F, G
		bidder letterhead signed by the competent	
		authority	
NInte	. A	Also Assess and an 190 to the first	

Note: According to the terms and conditions in the technical envelope, it is necessary to sign added documents. Bidders are strictly instructed not to attach irrelevant documents. Strictly follow the sequence and fields mentioned as per ATC while uploading documents. Non-Sequential Bids may be treated as incomplete for evaluation purpose.

### NOTE ON THE QUALIFICATION CRITERIA

### HIGH PERFORMANCE COMPUTING CLUSTER

- 1. Bidders must quote for all items. Part bidding is not allowed.
- 2. All the major items like (All Server nodes, cluster management software, other software suite) should be tested for seamless compatibility and should be from the same OEM.
- 3. Bidder and OEM both should not be blacklisted / banned / debarred with any Govt. / Research / PSU Organization / GeM Portal.
- 4. Bidders should submit customer credentials which clearly state that the bidder have sufficient knowledge and expertise for installation of scientific applications.
- 5. Bidder should submit a minimum of 3 number of similar PO of HPC Clusters supplied

- by them in the last 3 financial years along with the respective installation report as a proof of their expertise of supplying & maintaining HPC Clusters.
- 6. Bidder/ OEM should have at least 3 entries in the latest edition list of Indian Supercomputing List.
- 7. Bidders must submit bid / tender specific Manufacturer Authorization Form (MAF) from the OEM (OEM of servers and the Primary Interconnect Switch) which authorizes the bidder to quote within this requirement. Further, the MAF should also mention that the product being quoted will not be EOL (End-Of-Life) and EOS (End-Of-Service) for minimum next 7 Years.
- 8. Bidders should submit declaration that the solution being quoted by them will be fully backed and supported by the OEM for the entirety of the warranty period.
- 9. Scope of work will include supply, racking, installation, commissioning and time to time servicing of the entire solution being quoted.
- 10. Warranty 3 Years On-Site Comprehensive Warranty.
- 11. Bidder/ OEM shall maintain all the necessary spare parts for faster response.
- 12. Bidder/ OEM should have authorised service centre in Mumbai and Mumbai Suburban areas including a team of FSE (Field Service Engineers) for timely response (within 48 hours of raising complaint) and resolution of any complaints logged. Bidder/ OEM must submit details of the service centres along with a list of technically qualified engineers who can handle HPC Cluster Solutions.
- 13. Bidders must quote for latest generation hardware only. CPUs should of 5th or later generations.
- 14. Bidder shall submit details of Power Consumption, Rack space required, Heat Generated, and total cooling required for the entire solution within their technical bid.
- 15. Entire support and application installation shall be directly from the OEM.
- 16. Bidder should provide cluster management software and support for the entire warranty period. Cluster management software should be of same OEM as Server's.
- 17. Successful bidder must do the necessary data cabling in the rack as required during installation and commissioning.

18. Servers and switches should be rack mountable and should be supplied with all accessories.

### 3. Disqualification

The bid is liable to be disqualified in the following cases or in case the bidder fails to meet the requirements as indicated in this tender document:

- 1. The bid is not submitted in accordance with the procedure and formats prescribed in this document shall be treated as non-conforming bid.
- 2. During the validity of the bid, or its extended period, if any, the bidder increases the quoted prices.
- 3. The bidder qualifies the bid with own conditions.
- 4. The bid is received in an incomplete form by all the requisite documents, or the bidder has quoted only for a part of the project.
- 5. The information submitted in the technical bid is found to be misrepresented, incorrect or false, accidentally, unwittingly or otherwise, at any time during the processing of the Contract (no matter at what stage) or during the tenure of the Contract including the extension period, if any.
- 6. The Commercial bid is enclosed with the technical bid.
- 7. The bidder tries to influence the bid evaluation process by unlawful / corrupt / fraudulent means at any point of time during the tender process.
- 8. In case any one bidder submits multiple bids or if common interests are found between two or more bidders, the bidders are likely to be disqualified,
- 9. Any form of canvassing / lobbying / influence / query regarding short listing etc. will be treated as disqualification. While evaluating the bids, if it comes to the TIA's knowledge expressly or implied, that some bidders may have colluded in any manner whatsoever or otherwise joined to form an alliance resulting in delaying the processing of bid, then the bidders so involved are liable to be disqualified for this Contract as well as for a further period of four years from participation in any of the tenders floated by the TIA.
- 10. If the Technical bids contain any information on price, pricing policy, pricing mechanism or any information indicative of the commercial aspects of the bid.

11. Compliance of Restrictions under Rule 144 (xi) of GFR 2017: Restrictions on procurement from a bidder/OEM of a country which shares a land border with India are applicable.

### 3. Bills and Payments

The Bidder after receiving work order with designated locations for supply of Material, he shall supply such items accordingly within 30 days from the date of work order. The Bidder shall submit acknowledgement of delivery challan and installation report duly signed and verified by concerned Head of Office along with laboratory test report of product as per Government Resolution (Dated 01.12.2016) after which 100 % of the amount shall be paid after the Testing (Testing fee shall be borne by successful Bidder) after the verification of 10% random sample checking by Departmental Authority.

### 4. Penalty Criteria:

The Bidder fails to supply within stipulated time, then a penalty as per the Industry Department G.R. 01/12/2016 shall be applied as below. And the minimum limit of such penalty will be as below-

Category of Stores				Penalt	y Am	ount		
In case of an order of Rs.2.00 Lakh and above	At	the	the rate 1/2% per week su	subject	to			
	ma	ximuı	n limit	of 5%				

a. Penalty will be imposed on Bidder, if found any defects in the supplied commodities and the cost will be deducted based on quoted price by the concerned Bidder on Pro Rata basis.

### 5. Governing Law

The Contract shall be governed by and construed in accordance with the laws and by-laws of India, the State of Maharashtra and the local bodies in District. All disputes arising under or in relation to this Agreement shall be subject to jurisdiction of the Courts in Mumbai, only to the exclusion of other courts. If the event of any dispute arises out of the contract regarding the interpretation, meaning and breach of the terms of the contract, the matter shall be referred (as per the Arbitration and conciliation Act, 1996 of Government of India or any statutory modifications or re-enactment thereof) to the sole arbitration to be appointed by Mumbai. SNDT Women's University, 1 N. Thackersey Marg, Mumbai. The award of the arbitrator shall be final and binding on both the parties. The Mumbai courts shall have jurisdiction for any disputes and the venue for arbitration shall be Mumbai.

The Bidder shall comply and abide in all respects with the provisions of all statues, Rules and

Regulations applicable to the Bidder's employees, labour and workers and to its sub-Bidders including but not limited to the Minimum Wages Act, Employee State Insurance Act 1948, Employees Provident Fund and Miscellaneous Provisions Act 1952, Payment of Bonus Act 1972, the Contract Labour (Regulation & Abolition) Act 1970, Workmen's Compensation Act, Payment of Wages Act, and the Rules made there under.

Permits, Fees, Taxes

Unless otherwise provided in the contract documents, the Bidder shall secure and pay for all permits, Government fees and licenses necessary for the execution and completion of the works. The Bidder shall pay all duties including GST, Service tax, works contract tax, local taxes, Income tax and other taxes and any other levies required by law including all taxes. SNDT Women's University, 1 N. Thackersey Marg, Mumbai, authorities will not take any responsibility of refund of such taxes/fees and in case of disputes between taxing authority and the Bidder, SNDT Women's University, 1 N. Thackersey Marg, Mumbai and its officers shall be indemnified by the Bidder. Any violation, in the legal provisions of taxes, duties, permits and fees, carried out by the Bidder and detected subsequently shall be the sole responsibility of the Bidder and his legal heirs. Further SNDT Women's University, 1 N. Thackersey Marg, Mumbai shall not honour any claim arising out of any increase in any of the prevailing statutory duties, taxes, levies etc. as the same are inter-alia covered under the Price Variation Clause. At the time of quoting /bidding Bidder should bear the above fact in mind.

#### Note: -

- A. Govt. Resolutions of Industries, Energy, Labour Department Dt. on: 01/12/2016 of Appendix 4(B) Paragraph 4.4.1 will be applicable for this Bid regarding: -
  - 1. Risk Purchase
  - 2. Fall Clause
  - 3. Force Majeure Clause
- B. Stamp Duty as per rule will be paid by the L1 Bidder at the time of Agreement.

### Information of the Bidder

### Annexure-A

Sr.		Particular		
No.				
1	Name of the Bidder			
2	Registered Office Address, Telephone number and the E-mailID			
3		Correspondence/ContactAddress.Details of contact person- name,designation,address,mobile no and e-mail ID.		
4	Type of the Organization: (Propriet	ary/Partnership/Pvt. Ltd./PSU/Govt./Public Ltd)		
5	Year of establishment and Experie	ence in business(In number of years)		
6	Annual Turnover details			
7	Audited balance sheets (Attached)			
8	GST Registration No.			
9	PAN Card No.			
10	Details of the Bank			
	Title of the bank Account:			
	Name of Bank	:Type of Account		
	Account Number MICR Code :	:IFSC Code :		
11	Capacity in which bid is signed by tender.(Proprietor/Partner/Director			

Signature and Seal of the Bidder

### Annexure-B

### Certificate of the Annual Turn Over

Sr.No.	Financial year	Annual turnover (In Lacs)

Seal & Signature of the Bidder

**Chartered Accountant** 

### Annexure-C

### **DECLARATION REGARDING**

### **BLACK LISTING /DEBARRING FOR PARTICIPATION IN TENDER**

(Tobe executed & attested by Public Notary/ Executive Magistrate on Rs.500/-non judicial Stamp paper by the bidder)

	-,			
I/We	Manufacture/Partner(s)	/Authorized	Distri	butor
/agent ofM/S	hereby	declare	that	the
firm/company namely M/s	ha	s not been	blackliste	ed or
debarred or any criminal cases or	enquires pending agains	t our compa	anyby Un	ion /
State Government / Public Sector L				
organization.				
In case the above information is for contract will be rejected /cancelled addition to the above, the Universit any completed /partially complete	d by the University and y will not be responsib	EMD shall	beforfeite	ed.ln
	DEPONE	NT		
	Name			
	Address			
Attested:				
(Public Notary/Executive Magistrate)				

### Annexure-D

### **List of Clients**

Sr. No.	Name andAddress  of  Clients to whom computer tables are supplied by the bidder	Contact Number	Workorder/Purchas e order Reference Number and DatefromUniversity /Institution/Board Government Department

Note: The above information should be submitted on the letterhead of the bidder.

Date: / /2025

Name, Signature and Seal of the bidder

### Annexure-E

# E-tender for the selection of service provider for the supply of High Performance Computing Cluster at the UMIT, Mumbai

### Bidder's Declaration-1

I hereby certify that I have gone through all the information, terms and conditions stipulated in the tender document and hereby confirm to abide by thesame. I also certify that the rates quoted in financial/ commercial bid(BOQ) are comparable with the rate charged to any other Institution/ Department /Organization.

Signature:	
Nameofsignatory:_	

Name, Signature and Seal of the bidder

### ANNEXURE-F

### Bidder's Declaration-2

BID DOCUMENT FOR SUPPLY AND INSTALLATION OF HPC Cluster
I hereby certify that I have gone through all the information and terms and conditions stipulated in the bid document and hereby confirm that I abide by the same.

Signature:----Name of signatory:-----

Seal of the bidder

### **ANNEXURE G**

### TECHNICAL SPECIFICATION

### HIGH PERFORMANCE COMPUTING CLUSTER

Sr.	Details of required Technical Specifications	
No.	Details of required rechnical Specifications	Compliance
INO		Yes/No
1	Master Node	
"	Dual 12 Cores CPU's each of 2.40 GHz and min.2.5 MB Cache for	
	each physical core.	
	Minimum 128 GB DDR5 of highest frequency as supported by the	
	above CPU's. RAM should be scalable to atleast 512 GB in 100%	
	Balanced config. without discarding the current 128 GB of RAM	
	being quoted	
	• 2x 1.92 TB SATA 2.5" SSD (in H/W RAID – 1). RAID	
	Card shall support H/W RAID Levels 0, 1, 5, 6, 10	
	with atleast 1 GB of Cache.	
	System shall have minimum 6x PCI Express Gen 5.0 Slots (Min. 5x)	
	PCle 5.0 x16 Slots).	
	<ul> <li>Min. 2x USB, 1x VGA, 1x dedicated RJ45 remote management</li> </ul>	
	port.	
	<ul> <li>Chassis should have minimum 800W (1+1)</li> </ul>	
	Redundant Platinum Level Certified power supplies and 8x 3.5"/2.5"	
	Hot-Swap Drive Bays.	
	Max. 2U Rack Server	
	Compute Node	
	<ul> <li>Dual 32 Cores CPU's each with min. 2.50 GHz, 60M Cache.</li> <li>Min. 512 GB of DDR5 RAM of highest frequency as supported by</li> </ul>	
	the CPU. RAM should be scalable to atleast 2 TB in 100% balanced	
[	config. without	
	discarding the current 512 GB RAM being quoted.	
	Single 1.92 TB SATA 2.5" SSD	
	<ul> <li>Min. 2x USB 3.2 Gen1, 1x VGA, 1x dedicated RJ45</li> </ul>	
	remote management port.	
	<ul> <li>Min. 2x USB, 1x VGA, 1x dedicated RJ45 remote management</li> </ul>	
	port.	
	Chassis should have minimum 800W (1+1)	
	Redundant Platinum Level Certified power supplies and 8x 3.5"/2.5"	
	Hot-Swap Drive Bays.	
	Max 2U Rack Server with 800W Redundant Platinum or above     Lovel Cortified Power Symptom	
2	Level Certified Power Supplies.  GPU Accelerators	
	Specifications:	
	The GPU server must be pre-configured with a minimum of 4 GPU	
	cards, and must support scalability to at least 8 GPUs within the	
	same chassis without	
	7.1.7 M 5	

architectural modification.

Technical specifications of each GPU are as follows.

- Memory = 32 GB GDDR6
- Memory Interface = 256 Bit
- Memory Bandwidth = 576 GB/sec.
- No. of Cores = Min. 12,000
- Single Precision = 65.0 TFlops Performance
- System Interface = PCle 4.0 x16
- Total Board Power = 250 Watts
- Form Factor = Dual Width Active Cooling
   GPU Server specifications: Dual 32 Cores CPU's each with min. 2.50 GHz, 60M Cache. Min. 512

GB of DDR5 RAM of highest frequency as supported by the CPU. RAM should be

scalable to atleast 2 TB in 100% balanced config. Without discarding the current 512 GB RAM being quoted. Single 1.92 TB SATA 2.5" SSD. Min. 2x USB 3.2 Gen1, 1x VGA, 1x dedicated RJ45, remote management port.

### 3 NAS Storage

Single – Controller NAS Storage with the minimum specifications as below.

- 500 TB RAW Storage
- Storage shall support both Block (iSCSI, FCP, SRP) and File (SMB, NFS, FTP, AFP) Protocols out of the box.
- Host Interface: 2x 1G RJ45, 2x 10G RJ45
   Controller shall support RAID Levels 0, 1, 0+1, 5,
- 6, 50 & 60 with max. 24x SAS/SATA LFF/SFF bays in 4U Form Factor
- Box should support SSD Caching (optional upgrade)
- Box shall have built-in snapshot with rollback feature.
- · Box shall have WebUI for setup and configuration
- Controller shall have minimum 24 CPU Cores with 512 GB of Memory

### **Primary Network Switch**

Switch shall have the features as below.

- Minimum 12x 100M/1G/2.5G/5G/10G Base-T Ports, 2x 10G SFP+ Ports, 2x 1G/10G Base-T/SFP+ combo ports
- Switching Capacity = 320 Gbps
- Packet Forwarding Rate = 238.08 Mpps
- MAC Address Table = Upto 32K entries per device
- All required cables to be bundled

#### Secondary Network Switch

Minimum 24x 10/100/1000 Base-T RJ45 Ports Unmanaged, Ethernet Switch with all required cables Ethernet Switch with all required cables Advanced Features: Default software features include: Snapshot: 64 per source volume, 128 per system Remote replication (file-level)

E-tender document for the High Performance Computing Cluster

Optional features: SSD Cache Clients Supported: Windows, MAC OS, Linux, Free BSD, Solaris Protocol: SCSI, FCP, SRP" Portocol: SMB, NFS, FTP, AFP Block-level protocol: iSCSI, FCP, SRP" Ports: Storage should be configured with minimum 2 Number of USB ports  4 Server Rack Server Rack with the below features. • U Size = 42U • Dimensions = 800mm (Width) x 1200mm (Depth) • Doors = Front Perforated Door, Rear Perforated Split Door • Extra Features = Side Panels, Castors, Levelling feet • PDU's = 02 qty, of Vertical PDU's each of 22KW, 32A, 230V/400V with (18) IEC C13 and (6) IEC C19 Power Sockets • Server Rack shall also include top mounted self-cooling exhaust fan.  5 High-Performance Computing OS (Optimized Linux Distribution) Specifications: • Enterprise-grade Linux OS optimized for HPC, • Long-Term Support (LTS) Version (Compatible with Resource / Cluster Management Software), Preferred Ubuntu HPC OS.  6 Cluster resource management software ( Job Scheduler like Slurm, ): Specifications: • Must support dynamic resource allocation and Integrates with MPI and GPU resources, Multi-cluster scheduling support Cluster Management Software : • The HPC Cluster being quoted should have a bundled Cluster management software with the below set of features :- • HPC Cluster Suite Scalable cluster deployment and management Workload manager • Dynamic Workload manager change Shared Home • General FOSS compilers , libraries, parallel libraries , scientific Libraries • Graphical Monitoring Simple and easy to use GUI web based interface for targeted workload management. • High Availability Support & Maintenance Updates and bug fixes Infiniband Support, More Installation Options - Install to Hard Disk, run stateless (Diskless) & run diskless with a bit of state (Statelite) Built in Automatic discovery - No need to power on one	
Server Rack with the below features.  U Size = 42U  Dimensions = 800mm (Width) x 1200mm (Depth)  Doors = Front Perforated Door, Rear Perforated Split Door  Extra Features = Side Panels, Castors, Levelling feet  PDU's = 02 qty, of Vertical PDU's each of 22KW, 32A, 230V/400V with (18) IEC C13 and (6) IEC C19 Power Sockets  Server Rack shall also include top mounted self-cooling exhaust fan.  High-Performance Computing OS (Optimized Linux Distribution)  Specifications:  Enterprise-grade Linux OS optimized for HPC,  Long-Term Support (LTS) Version (Compatible with Resource / Cluster Management Software), Preferred Ubuntu HPC OS.  Cluster resource management software ( Job Scheduler like Slurm, ):  Specifications:  Must support dynamic resource allocation and Integrates with MPI and GPU resources, Multi-cluster scheduling support Cluster Management Software :  The HPC Cluster being quoted should have a bundled Cluster management software with the below set of features :-  HPC Cluster Suite  Scalable cluster deployment and management  Workload manager  Dynamic Workload manager change  Shared Home  General FOSS compilers , libraries, parallel libraries , scientific Libraries  Graphical Monitoring  Simple and easy to use GUI web based interface for targeted workload management.  High Availability  Support & Maintenance  Updates and bug fixes  Infiniband Support,  More Installation Options - Install to Hard Disk, run stateless (Diskless) & run diskless with a bit of state (Statelite)  Built in Automatic discovery - No need to power on one	OS, Linux, Free BSD, Solaris Protocol Support: File-level protocol: SMB, NFS, FTP, AFP Block-level protocol: iSCSI, FCP, SRP" Ports: Storage should be configured with minimum 2 Number of USB ports
Distribution)  Specifications:  Enterprise-grade Linux OS optimized for HPC, Long-Term Support (LTS) Version (Compatible with Resource / Cluster Management Software), Preferred Ubuntu HPC OS.  Cluster resource management software ( Job Scheduler like Slurm, ): Specifications:  Must support dynamic resource allocation and Integrates with MPI and GPU resources, Multi-cluster scheduling support Cluster Management Software: The HPC Cluster being quoted should have a bundled Cluster management software with the below set of features: HPC Cluster Suite Scalable cluster deployment and management Workload manager Dynamic Workload manager change Shared Home General FOSS compilers, libraries, parallel libraries, scientific Libraries Graphical Monitoring Simple and easy to use GUI web based interface for targeted workload management. High Availability Support & Maintenance Updates and bug fixes Infiniband Support, More Installation Options - Install to Hard Disk, run stateless (Diskless) & run diskless with a bit of state (Statelite) Built in Automatic discovery - No need to power on one	Server Rack with the below features.  • U Size = 42U  • Dimensions = 800mm (Width) x 1200mm (Depth)  • Doors = Front Perforated Door, Rear Perforated Split Door  • Extra Features = Side Panels, Castors, Levelling feet  • PDU's = 02 qty. of Vertical PDU's each of 22KW, 32A, 230V/400V with (18) IEC C13 and (6) IEC C19 Power Sockets  • Server Rack shall also include top mounted self-cooling exhaust fan.
Slurm, ): Specifications:  Must support dynamic resource allocation and Integrates with MPI and GPU resources, Multi-cluster scheduling support Cluster Management Software:  The HPC Cluster being quoted should have a bundled Cluster management software with the below set of features:  HPC Cluster Suite Scalable cluster deployment and management Workload manager Dynamic Workload manager change Shared Home General FOSS compilers, libraries, parallel libraries, scientific Libraries Graphical Monitoring Simple and easy to use GUI web based interface for targeted workload management.  High Availability Support & Maintenance Updates and bug fixes Infiniband Support, More Installation Options - Install to Hard Disk, run stateless (Diskless) & run diskless with a bit of state (Statelite) Built in Automatic discovery - No need to power on one	Distribution) Specifications:  Enterprise-grade Linux OS optimized for HPC, Long-Term Support (LTS) Version (Compatible with Resource / Cluster Management Software), Preferred
TO COUNTE ALS HIDE IT DISCOVED	Slurm, ): Specifications:  Must support dynamic resource allocation and Integrates with MPI and GPU resources, Multi-cluster scheduling support Cluster Management Software:  The HPC Cluster being quoted should have a bundled Cluster management software with the below set of features:-  HPC Cluster Suite Scalable cluster deployment and management Workload manager Dynamic Workload manager change Shared Home General FOSS compilers, libraries, parallel libraries, scientific Libraries Graphical Monitoring Simple and easy to use GUI web based interface for targeted workload management.  High Availability Support & Maintenance Updates and bug fixes Infiniband Support, More Installation Options - Install to Hard Disk, run stateless (Diskless) & run diskless with a bit of state (Statelite)

	<ul> <li>Nodes that fail can be replaced and back in action by just</li> </ul>			
	powering them on.			
	<ul> <li>Dynamic provisioning of nodes</li> </ul>			
7	CUDA & OpenMPI (Message Passing Interface) Libraries (For			
	Parallel Computing & GPU Optimization) Specifications:			
	<ul> <li>CUDA for parallel computing platform and API model for</li> </ul>			
	using GPUs.			
	<ul> <li>MPI for distributed computing, high-performance</li> </ul>			
	implementation of the MPI standard			
8	Domain-Specific Software (Simulations, Data Analytics &			
	Modeling Tools)			
	Specifications:			
	HPC-enabled scientific computing softwares for, application			
	Frameworks: TensorFlow, PyTorch, OpenFOAM, QGIS			
	Must support:	Į		
	<ul> <li>Parallel computing &amp; distributed processing frameworks</li> </ul>			
	<ul> <li>Geospatial data analysis &amp; remote sensing workflows</li> </ul>			
	<ul> <li>Machine learning &amp; deep learning model training on HPC</li> </ul>			
	hardware			
	<ul> <li>High-performance data handling &amp; storage optimization</li> </ul>	No.		
	Required support for:			
	Cluster-based execution			
	GPU acceleration for AI/ML			
	Scalability for large datasets			
	All software must be open-source and configured to run seamlessly			
	on the cluster hardware			
9	To ensure effective implementation and seamless functionality, it is			
	necessary to procure the entire HPC cluster as a single turnkey	1		
	solution from a qualified vendor. This includes not only the supply			
	of hardware components—such as the master node, compute			
	nodes, GPU accelerators, storage systems, and networking			
	equipment—but also the installation and configuration of all required			
	software, including the HPC-optimized Linux operating system,			
	resource manager (e.g., Slurm), MPI libraries (e.g., OpenMPI with			
	CUDA), and domain-specific applications (e.g., TensorFlow,	-		
	PyTorch, OpenFOAM, and QGIS).			
	The selected vendor shall be responsible for the end-to-end setup			
	of the HPC infrastructure, encompassing: Supply and delivery of all			
	listed components,			
	Installation and configuration of the full software stack, Hardware-			
	software integration and system optimization, Initial testing,			
	benchmarking, and validation of cluster performance, Basic training			
	for administrators and end-users, Provision of system			
	documentation and post-installation technical support			
lote	The above chart should be submitted on the letterhead of	tho	OFM	Do

Note: The above chart should be submitted on the letterhead of the OEM/ Dealer/ Distributor/bidder with name, signature, seal of the OEM/Dealer/Distributor/Bidder.