



**INDIAN INSTITUTE OF TECHNOLOGY BOMBAY**  
**MATERIALS MANAGEMENT DIVISION**  
**Powai, Mumbai 400076**

**Purchase Requisition No. 1000013959 (SRM/RFX No. 6100000305)**

**Technical Specifications for Computer Nodes**

**1. Compute Nodes: Quantity 6**

Processors	Dual Intel Xeon processors with at least 10 physical cores per CPU socket and at least 2.2 GHz Clock frequency
Memory	2x 16 GB (total of 32 GB)DDR4 ECC RAM. At least 8 slots for registered DDR4 ECC RAM provided
HDD	Atleast1 TB space with at least 7.2KRPM speed. Should be SAS. At least 4 slots for hot plug hard drives
Network	Ethernet network interface card
Power supply	Redundant Power supply and redundant hot-plug fans and appropriate number of properly configured power distribution units (PDUs)
Port	Minimum USB 2.0
OS	Linux (CentOs) HPC version (64 Bit)
Type	Rack-mountable (1Uor 2U) enclosures
Warranty	5 years on-site warranty on all supplied hardware directly by OEM

**2. Accessories**

- Necessary number of Cat6 cables to assemble the server.

**Installation terms and conditions:**

Successful vendors/ OEM needs to install the procured nodes to the existing HPC cluster in the group. Since Rack space for the nodes are in place, no additional racks are solicited. The existing cluster has one master node (Intel Silver 4114, 4x16GB RAM, 8x1.2 TB HDD) and one compute node (Intel Silver 4114, 4x16GB RAM, 1.2 TB HDD). More details of the specifications are available on request. **PBS manager** is installed for managing queues, and will require installation on the additional nodes such that the older and the additional nodes act together as one HPC. The vendors/ OEMs also should ensure that the software installation is smooth for both the new and the old nodes i.e. proper functioning of the entire cluster including the existing components are the responsibility of the Vendors/ OEMs. **Solution offered thus should be comprehensive and turnkey.**

## **Terms & Conditions:**

1. Complete installation and commission of the HPC Cluster Computer system to be done by the bidder within 4 weeks from the date of creation of purchase order. The quotations should be submitted with a clear Scope of Work.
2. OEM should be one of the following: HPE, Dell, Fujitsu, IBM, Cray Inc., and Lenovo.
3. All hardware and software should be quoted with 5 years warranty (24 X 7 with 4-6 hrs telephonic response). Undertaking from OEM of 5 years on-site warranty should be provided.
4. Details of the Power and Cooling requirements for the proposed systems should be submitted. Power socket details should be provided.
5. A detailed compliance sheet has to be submitted in accordance with the above specifications. Any deviations have to be highlighted and details to be mentioned.
6. Full Server configuration as listed above should be tested and integrated at OEM manufacturing plant which includes all major components, power supply, cooling fan cabinet etc. No local site integration of server components will be allowed. Only cluster integration and software installation is allowed at site.
7. The bid must include all details of technical specifications of the equipment along with commercial terms and conditions. The bill of material printed technical brochure and any other document, which will help in the evaluation of bids.

## **Eligibility Criteria of Bidders**

- (i) Bidder should submit valid Manufacturer Authorization Letter with the OEM in their quotation for this specific bid. The OEM/ bidder should be ISO 9001 certified (Maintenance & System Integration). Please attach a copy of the certificate.
- (ii) The bidder shall provide the Registration number of the firm along with the LST/ CST/ WCT No. and the PAN Number allotted by the concerned authorities.
- (iii) The bidder must have experience of executing similar orders of HPC with more than 100 cores in India. The bidder must enclose documentary evidence of supplying and integrating minimum of 3 such orders of HPC cluster with at least 100 cores within the last 3 financial years for any organization.
- (iv) Bidder should have installed and configured PBS manager in the past, and details of the clusters where PBS manager has been handled by the bidder needs to be attached.

- (v) An undertaking from the OEM is required stating that they would facilitate the bidder on a regular basis with technology/product updates and extend support for the warranty as well.

**Warranty and support**

- a) The vendor should provide complete turnkey solution.
- b) The vendor shall be responsible for round-the-clock operation and maintenance for **five** years from date of start of operation and shall provide an undertaking for the same at the time of submitting the tender.
- c) All equipment / components should carry an onsite replacement warranty of **five** years.
- d) The installation should be done by certified and trained engineers followed by comprehensive user training.