

# Indian Institute of Technology Kanpur

## Department of Chemical Engineering

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### Quotations Invited

Sealed quotations are invited for a 5-node cluster with the specifications mentioned below. **Technical as well as commercial quotations must be sent separately in sealed envelopes.** In the document for technical bid, mention in a tabular form compliance with each of the specifications (for master and compute nodes) listed below. Quotations may be sent by post/courier to the above mentioned address. Terms and conditions as well as detailed specifications are given below.

Enquiry No. IITK/CHE/PA/001  
Opening Date : 30/08/2013  
Closing Date : 09/09/2013

### Terms and conditions :

The vendor should have installed at least five compute clusters in India in last five years. Details of these previous installations must be provided. If the vendor falls short of satisfying the above criteria but has tie -up with an Original Equipment Manufacturer (OEM), the OEM then should have met the above criteria in India. In addition, OEM should provide a guaranty for clustering and also for application software integration.

- The vendor should give the power and cooling requirements for the cluster solution along with the proposal.
- Installation and integration of all supplied hardware and software shall be done by the vendor, it includes integration with existing set-up
- Equivalent (or better) hardware/software can be allowed at the discretion of IIT Kanpur. However, in such cases, the vendor must provide sufficient justification for the deviation from the specifications given here.
- Warranty period (minimum 3 years on-site) should be mentioned.
- The vendor should be able to install and integrate (in parallel) Linux operating system with usual cluster management software such as ROCKS. Standard open source compilers for C/C++ and open source mathematical libraries like BLAS, ATLAS, MPI libraries should also installed. The vendor should also install Intel Fortran

compiler (standard open source or free academic version) and LAMMPS. The vendor is also required to maintain integration of licensed software (if any) with the cluster throughout the warranty period.

- The quoted prices can be in INR or in valid foreign currencies (e.g. US Dollar). For INR quotations, delivery should preferably be up to IIT Kanpur. For foreign currency quotations, delivery mode should be CIF New Delhi. Sales Tax, VAT and any other applicable charges such as freight charges should be mentioned.
- Quotations must be valid for 90 days
- Delivery period should not be more than 8 weeks
- Payment terms will be as per IIT Kanpur rules
- The Institute reserves the right of accepting or rejecting any quotations without assigning any reason thereof.

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**Detailed Specifications are given below**

**1.Master Node (1 Nos.)**

Chassis	<b>1 U Rack Mountable</b>
CPU	<b>Two(2) x Intel® Six-Core Xeon® Processor E5-2620 (15M Cache, 2.00 GHz, 7.20 GT/s Intel® QPI)</b>
Chipset	Intel® C602 Chipset
Memory	<b>24GB (6x 4GB) DDR3 ECC REG (Max. 512GB)</b>
Optical drive	<b>DVD RW</b>
HDD	<b>3x 2TB 7200 RPM SATA Enterprise Hot Swappable HDD</b>
RAID Support	On Board 4 port SATA Controller with <b>RAID 0/1/10</b>
HDD Bays	4 <b>Hot-swap</b> 3.5"HDD Bays with <b>Drive Carriers</b>
Graphic	Integrated with 16MB VRAM
Networking	On Board <b>Dual</b> Gigabit Ethernet Ports + 1x Mgmt LAN
Management	On-Board iKVM for <b>KVM-over-IP Support</b>
On Board I/O	3x RJ-45 (One for iKVM), 4x USB 2.0 (Front x2, Rear x2), 1 x VGA port, 2x PS/2 ports
Power Supply	<b>1+1 Redundant 550W 80PLUS Gold (Hot Plug) Power Supply or Higher</b>
Peripherals	<b>None</b> (No Keyboard, Mouse, Monitor Bundled with system)
Warranty	<b>3 years</b> onsite warranty.

## 2. Compute Nodes (4 Nos.)

Chassis	<b>1 U Rack Mountable</b>
CPU	<b>Two(2) x Intel® Six-Core Xeon® Processor E5-2620 (15M Cache, 2.00 GHz, 7.20 GT/s Intel® QPI)</b>
Chipset	Intel® C602 Chipset
Memory	<b>24GB (6x 4GB) DDR3 ECC REG (Max. 512GB)</b>
Optical drive	<b>DVD RW</b>
HDD	<b>1x 1TB 7200 RPM SATA Enterprise Hot Swappable HDD</b>
RAID Support	On Board 4 port SATA Controller with <b>RAID 0/1/10</b>
HDD Bays	<b>4 Hot-swap 3.5"HDD Bays with Drive Carriers</b>
Graphic	Integrated with 16MB VRAM
Networking	On Board <b>Dual</b> Gigabit Ethernet Ports + 1x Mgmt LAN
Management	On-Board iKVM for <b>KVM-over-IP Support</b>
On Board I/O	3x RJ-45 (One for <b>iKVM</b> ), 4x USB 2.0 (Front x2, Rear x2), 1 x VGA port, 2x PS/2 ports
Power Supply	<b>1+1 Redundant 550W 80PLUS Gold (Hot Plug) Power Supply or Higher</b>
Peripherals	<b>None</b> (No Keyboard, Mouse, Monitor Bundled with system)
Warranty	<b>3 years</b> onsite warranty.

This is the end of the basic configuration. Optional items must be quoted separately.

### Optional Items

- Extra 4GB RAM (price to be quoted per node)
- Extra 500 GB storage in master node.
- IPMI card or other equivalent card for temperature monitoring of the cluster.