

Indian Institute of Technology Kanpur
Department of Biological Sciences and Bioengineering

Quotations Invited for HPC Cluster

Enquiry No: BSBE/IG/NC/RS1 dated 10th September 2013

Opening Date: 11th September 2013 at 10:00 am

Closing Date: 17th September 2013 at 5:00 pm

Sealed quotations are invited for a 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 node, compute nodes and the fabric) listed below. Quotations may be sent by post/courier to the address mentioned below. Terms and conditions as well as detailed specifications are given below. The term vendor is used interchangeably with service provider in the document.

Terms and conditions:

1) The vendor should have installed at least five (5) compute clusters at any academic institutions in India in the last three years. Details of these previous installations must be provided.

2) The vendor must also have at least ten (10) installations registered in the current (as of June 2013) Top 500 list of supercomputers.

If the vendor falls short of satisfying the second (2nd) criteria but has tie-up with an Original Equipment Manufacturer (OEM), the OEM then should have met the above criteria. In addition, OEM should provide a guarantee for clustering and also for application software integration.

- The vendor should give the power and cooling requirement 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 the existing setup.
- 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. A hardware/software solution, deemed superior by IIT Kanpur, will be given preference over other solutions if matching prices.
- Warranty period (minimum 3 years on-site) should be mentioned. All warranties are required to be **comprehensive and on-site (24x7) on complete cluster stack.**
- 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 be installed. The vendor should also install Intel Fortran and C/C++ compilers (standard open source or free academic versions), GROMACS (version 4.6 or later), NAMD (version 2.9 or later), Python (version 2 and version 3 along with Numpy, Scipy and biopython for both python versions, if available) and BioPerl . 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 applicable charges such as freight charges should be mentioned.
- Quotations must be valid for at least 90 days.
- Delivery period should not be more than 10 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.
- Maximum educational discount should be offered and mentioned.
- The order quantity of items may increase or decrease as per the discretion of IIT Kanpur.

The quote should reach the undersigned on or before 5 pm on or before 16th September 2013. The envelope should be marked as “**BSBE HPC Server**”.

The Head
Department of Biological Sciences & Bioengineering
Indian Institute of Technology,
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For any queries, please contact:

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Detailed specifications

1. Master Node

(1 Nos.)

Chassis	2U Rack mountable
CPU	Two (2) x Intel 4-core Xeon Processor E5-2609 (10M Cache, 2.4Ghz)
Memory	16GB DDR3 ECC REG
HDD	One (1) x 500GB SATA/Nearline SAS for OS
RAID array	4TB Raw as two (2) x 2TB NearLine SAS in hardware RAID 1
Infiniband	One(1) x QDR/FDR infiniband adapter with infiniband cable
Ethernet	Onboard GigE or higher ethernet adapter with ethernet cable
Power Supply	Redundant 500W 80PLUS gold power supply or higher
Peripherals	keyboard, mouse, monitor bundled with system
Warranty	3 years on-site comprehensive warranty.

2. Compute Nodes

(Minimum 5 Nos.)

Chassis	2U Rack mountable
CPU	Two (2) x Intel 8-core Xeon Processor E5-2650 (20M Cache, 2.0 Ghz)
Memory	32GB DDR3 ECC REG
HDD	One (1) x500GB SATA/Nearline SAS
Infiniband	One(1) x QDR/FDR infiniband adapter with infiniband cable
Ethernet	Onboard GigE or higher ethernet adapter with ethernet cable
Power Supply	Redundant 500W 80PLUS gold power supply or higher
Peripherals	None (no keyboard, mouse, monitor bundled with system)
Warranty	3 years on-site comprehensive warranty.

3. Infiniband Switch

(1 Nos.)

Specifications	8-port QDR/FDR infiniband switch compatible with infiniband adapters of nodes.
Warranty	3 years on-site comprehensive warranty