

INDIAN INSTITUTE OF TECHNOLOGY RAJASTHAN  
MBM Engineering College Campus, Ratanada, Jodhpur – 342011.

TENDER FOR HIGH PERFORMANCE COMPUTING (HPC) SYSTEM  
Tender Enquiry No. IITJ/TEN/HPC/2010-11/22

## CORRIGENDUM

### 1. Relaxation

#### ***Eligibility Criteria of Bidders:***

- In case of unavailability of the documentary evidence on the eligibility criteria 2.e, the OEM/the authorized partner of the OEM should provide an undersigned undertaking on their experience during the last 3 financial years stating the same.

### 2. Deleted:

#### ***ANNEXURE- II***

Technical specifications for the HPC

- SLALOM Benchmarking for scalability

### 3. Inclusions

#### ***Prices & Payment Terms:***

- In case bidders quote in foreign currency they should quote along with separate price in Ex-work / FOB / CIF, packing, forwarding charges and any other charges.
- Bidders should convert the total cost (basic price) in INR at date of submission of bid.

#### ***ANNEXURE – II***

Technical specifications for the HPC

- complete documentation of the HPC system certified by the supplying OEM from <http://www.top500.org/> before or after the installation of the HPC system.
- Hands on training for faculties and students on the HPC system for 2 weeks.

## 4. Changes

### ***Prices & Payment Terms:***

- 70% Payment of the total order value shall be released by the Institute after receipt of materials (in good condition) and balance 30% will be released after complete successful, documentation, installation, testing and training of the HPC system within 30 days.

### ***ANNEXURE - I***

- Last date of bid submission: 10th November 2010, 4.00 pm
- Technical bid opening : 13th November 2010, 10:00 am
- Price bid opening: Technically qualified bidders will be intimated about the date, time of opening of the price-bid.

### ***ANNEXURE – II***

Technical specifications for the HPC

- Theoretical Peak Performance – 5.8 TF (not including GPUs)
- Min 85% sustained throughput

## 5. Clarifications

### ***Eligibility criteria of bidders:***

In 2.c the “annual turnover” should be read as “total annual turnover”

### ***Evaluation Process:***

#### **1 It is clarified that:**

- For the bidders satisfying the Qualifying Criteria and Technical Specifications, the price comparisons shall be made over the total cost of the HPC solution in INR with three years of on-site warranty (***from the date of successful installation***) that includes shifting of the HPC system from the current MBM campus to the new IIT Rajasthan campus. The bidder with the lowest total price (L1) will normally be selected from the bidders satisfying the Qualifying Criteria & Technical Specifications.

## ***ANNEXURE – II***

Technical specifications for the HPC

#### **2 It is clarified that:**

- ~512 cores with Intel Xeon Series processors (preferably with  $\geq 8$  cores/server)
- Commercial cluster management software with support for 3 yrs and with upgrades certified by the supplying OEM
- 6 GB DDR3 memory per core
- 80TB file system. SAS/SATA disks with RAID-5/6 (usable)
  - 20 TB scratch, mounted on the computing nodes
  - 20 TB scratch, distributed and connected to the computing nodes (no-single point of failure)- PFS
  - 40 TB home storage with SAN (no-single point of failure)- NFS
  - File System management s/w should be supported for 3 years and commercial with upgrades
- Infiniband interconnect from Voltaire or an equivalent commercial product (bandwidth 40 Gbps) with 100 % non-blocking architecture (4 X QDR)
- 1 GigabitE network connectivity (Uplink ports upgradable up-to 10 GbE)
- 40TB backup tape drive (compressed/scalable with at least LTO-5)

- 5 core login (management) terminal (each quad core server) with 300 GB/terminal storage and 12GB DDR3 memory per terminal with Infiniband connectivity– Full virtualization support with VMWare or an equivalent commercial s/w to be certified by the OEM from <http://www.top500.org/> with support upto 3 years and upgrades.
- Red Hat /SUSE Linux – enterprise edition, 10 floating license for Intel Fortran, C, C++ compilers, Intel cluster toolkit for HPC requirement.
- 2 GPGPU cards in the HPC system in two nodes (NVIDIA Tesla C2050)
- Factory integrated system (HPC system (including h/w and s/w) must be certified by the supplying OEM from <http://www.top500.org/>)
- Job Scheduler (preferably PBS Pro or an equivalent commercial product to be certified by the supplying OEM from <http://www.top500.org/> with support upto 3 yrs and upgrades)
- Automatic email massaging facility in case the HPC system is down
- Installation of software's (available at IIT Rajasthan) in the HPC system, e.g.
  - ABAQUS, ANSYS, FLUENT, GAMBIT, HYPERMESH
  - Matlab, NASTRAN, PATRAN, NAMD, STAR-CCM+
  - Software's for image, speech processing
  - Software's for weather prediction
  - Open source software's e.g. OpenFOAM
  - etc.