



**DEPARTMENT OF BIOTECHNOLOGY**  
**Indian Institute of Technology, Madras, Chennai, 600 036.**

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Telephone No.22574126, 22574101, FAX No.22574102

**Professor :N.ATHI NARAYANAN**

Date: 29.11.2018

**Ref: BT/ATHI/2018/036/SPL**

**Dt. 29.11.18**

**Due Dt. 19.12.18**

1. Quotations are invited in duplicate for the various items shown below/overleaf/ enclosed list.
2. The quotations duly sealed and super scribed on the envelope with the reference No. and due date, should be addressed to the undersigned so as to reach him on or before the due date stipulated above.
3. The quotations should be valid for sixty days from the due date and the period of delivery required should also be clearly indicated.
4. If the item is under DGS & D Rate Contract, Rate Contract Number and the price must be mentioned. It may also please be indicated whether the supply can be made direct to us at the rate contract price. If so, please send copy of the R.C. (Please note that we are not Direct Demanding Officers).
5. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the Quotations, wherever applicable. Samples if called for should be submitted free of charges and collected back at the supplier's expenses.
6. **Local Firms:** Quotations should be for free delivery to this Institute. If quotations are for Ex-Godown, delivery charges should be indicated separately.
7. **Firms outside Chennai:** Quotations should be for F.O.R Chennai. If F.O.R. Consigner stationer freight charges by passenger train/lorry transport must be indicated. If Ex-Godown, Packing, forwarding and freight charges must be indicated.
8. The rates of Sales/General Taxes and the percentage of such other taxes legally leviable and intended to be claimed should be distinctly shown along with the price quoted. Where this is not done, no claim for Sales/General Taxes will be admitted at any stage and on any ground whatsoever. **The taxes leviable should take into consideration that we are entitled to have concessional sales tax applicable to non-government educational institutions run with no profit motive for which a Concession. Sales tax certificates will be issued at the time of final settlement of the bill.**
9. Goods should be supplied carriage paid and insured.
10. Goods shall not be supplied without an official supply order.
11. **Payment:** Every attempt will be made to make payment within 30 days from the date of receipt of bill/acceptance of goods, whichever is later.

## List of Items Required

S.No.	Parameters	Values or Notes
<b>GPU Compute Node: Quantity 1 (with at least 3 slots for GPU cards)</b>		
1	<b>Processor</b>	2x Intel Xeon E5-2630V3 (2.4GHz/8-Core/20MB/8.0GT-s QPI)
2	<b>Memory</b>	64GB (4x 16GB) DDR4 Reg. ECC 2133MHz (4GB/core) with necessary free slots and provision to add at least another 64 GB in future using the same DIMM modules
3	<b>Internal Storage</b>	1x1TB hot-swap SATA Enterprise class 7.2K rpm
4	<b>I/O Ports</b>	1x Single-Port QDR 40Gbps Infiniband Adpater, 1x 2M QDR QSFP Infiniband Cable, 2x Gigabit Ethernet Port and 1x Dedicated LAN for system management
5	<b>Power Supply</b>	Redundant Platinum Level (94%) Power Supplies
6	<b>Mount type</b>	Rack mount Rail Kit
7	<b>Warranty</b>	3 years on-site comprehensive warranty
8	<b>GPU Cards &amp; Support</b>	Node must be populated with 3x K40 GPU cards
9	<b>Supplier capability</b>	The bidder (System Integrator) should have Technical expertise in implementing GPU/Accelerator cluster, which includes installation configuration, maintenance and customization as per requirement.
10	<b>Other conditions</b>	<ul style="list-style-type: none"> <li>• The server and all its components should be verified and recommended by the motherboard manufacturer by means of compatibility list and should be compatible with the existing cluster (Model and make are given below).</li> <li>• Necessary power, cooling, GPU power cables and others required to establish connection with existing cluster should be included in the quote.</li> <li>• The part number/model numbers of the memory and HDD should be provided.</li> <li>• The entire cluster solution should be in the lowest foot print and the lowest power consumption.</li> </ul>
11	<b>Installation, Warranty and Training</b>	<ul style="list-style-type: none"> <li>• The vendor shall install and configure all required hardware and open source software suites, including but not limited to racking and stacking, cluster networking, configuring nodes, installation of open source compilers and applications, configuration of environment variables and license utility configuration.</li> <li>• Necessary GPU drivers, toolkit and SDK must also be installed and shown to work as a cluster.</li> <li>• Pre-installed softwares (MATLAB and GPU GROMACS) must be shown to be working using the installed node and GPU cards.</li> <li>• The vendor to ensure that the hardware and software components are compatible with each other, and provide necessary cables/wires and any other accessories necessary for connecting the supplied components.</li> </ul>

		Bidder must install the complete system interconnecting all the components above with an existing cluster (Make and Model described below).
12	<b>Acceptance Test</b>	As part of acceptance procedure, bidder must show the working of GPU GROMACS by compiling and running the input file given by the end-user.
13	<b>Compliance statement</b>	Compliance statement needs to be provided by vendors clearly specifying COMPLY/NON COMPLY with remarks of all of the points mentioned above.
<b>Note: It will be sole discretion of IITM to choose one or more technical qualified vendors. Compliance to this point is mandatory.</b>		

**Model and Make of the existing cluster:**

**Master Node: Model #- BOSTON 4U GPU Server Solution (Boston 7047GR) – 1 No**

S No	Description	Qty
1	2U, Dual SKT, Intel C612 Chipset, SATA, Redundant 740W Platinum PSU	1
2	Haswell 8C E5-2630V3 2.4GHz 20M 8.0GT/s QPI	2
3	16GB DDR4-2133 ECC Reg RoHS	4
4	Toshiba 3.5" 3TB 7.2K RPM SATA	4
5	LSI 9260 8-Port RAID Card	1
6	Intel Qlogic Single-Port QDR 40Gbps Infiniband Adapter	1
7	Intel 2M QDR 40Gbps QSFP Infiniband Cable	1
8	2M CAT6 Ethernet Cable – Blue	1

**GPU Compute Nodes : Model # - BOSTON 4U GPU Server Solution (Boston 7047GR) – 2 No**

S No	Description	Qty
1	4U, Dual SKT, Intel C612 Chipset, SATA, Redundant 1280W Platinum PSU	1
2	Haswell 8C E5-2630V3 2.4GHz 20M 8.0GT/s QPI	2
3	16GB DDR4-2133 ECC Reg RoHS	4
4	Toshiba 3.5" 1TB 7.2K RPM SATA	1
5	Intel Qlogic Single-Port QDR 40Gbps Infiniband Adapter	1
6	Intel 2M QDR 40Gbps QSFP Infiniband Cable	1
7	2M CAT6 Ethernet Cable – Blue	1
8	Rack mount Rail Kit	1
9	NVIDIA Tesla K40C GPU	3

**Primary & Secondary Interconnect switch**

S No	Description	Qty
1	Mellanox 8-Port QDR 40Gbps Infiniband Switch	1
2	D-Link 16-Port DGS-1016D Gigabit Switch	1

❖ Tenders should be submitted in Two-bid system: separate technical and financial bids