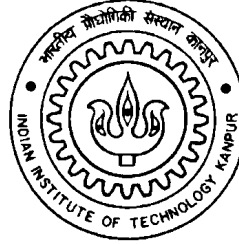**Dr. S. Sarkar**
Professor

DEPARTMENT OF MECHANICAL ENGINEERING

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Date: 05.12.2011

Enquiry letter for purchase of cluster

Tender No: ME/SS/05-2011

Sub: **Quotation for supply of High Performance cluster with Infiniband & Gigabit backbone**

Sir / Madam,

With reference to the subject mentioned above, you are invited to submit the quotation in a sealed cover. Configuration/Specification and required quantity of items are given below:

Terms and condition:-
1. Sealed Quotation must reach to us till 11.12.2011 before 5.00PM and should be sent to Prof. S. Sarkar, Mech Engg Dept, IIT Kanpur.
2. Please quote for each item mentioned separately.
3. Prices should be FOR IIT Kanpur
4. Please note that the present configuration of cluster is an alternate to the configuration mentioned in the earlier enquiry letter numbered ME/SS/01-2011. We may decide to purchase either of the two configurations.
5. The quotations submitted against the enquiry letter numbered ME/SS/01-2011 and the present one will be opened on 12.12.2011.
6. 3 Years comprehensive warranty
7. The decision on buying the product will be sole discretion of the buyer.

Best regards,

Sincerely,

(SUBRATA SARKAR)
Name of the Indenter / PI
Dept of Mechanical Engg. IIT Kanpur

Item No	Item	Description	Qty
1	**Server:**	**Master Node**	**1**
	Processor	2 x 16 Core processors AMD Opteron™ 6274 (2.2GHz/16-core/16MB/115W) Processor or higher	
	Cache	16MB shared L3 cache per processor or higher	
	Memory	Min 64 GB PC3-10600R Registered DDR3 (1333MHz) Memory upgradeable to 512 GB	
	Memory Features	Advanced ECC with Online spare Memory feature	
	Network Controller	2 x Integrated Multifunction Dual Port Gigabit Server Adapter for a total of 4 Ports	
	Storage Controllers	6G SAS Controller with 1GB Flashed Backed Write Cache. Controller should be capable of online scan and remap of bad sectors to ensure data integrity. Controller should support raid 0, 1, 1+0, 5, 5+0,6	
	Storage Bays	Support for up to 16 SFF SAS, SFF SATA Hard Disk Drive bays capable of supporting hot plug Hard Drives.	
	Hard Disk Drive	12 x 1 TB 6G MDL SAS 2.5" 7.2k Hot Pluggable SFF Hard Disk Drive	
	Graphics	Integrated with adequate memory to support:	
		16 bit color: maximum resolution of 1600 x 1200	
		32 bit color: maximum resolution of 1280 x 1024	
	Form Factor	2U Rack Mountable	
	Optical Drive	Internal DVD ROM	
	Manageability	Dedicated Hardware Controller based Management. Management port should support record/playback, shared remote console for minimum 6 users simultaneously	
	Manageability Features	Should be able to manage systems through a web-browser, OEM to provide its own systems management software.	
	Warranty	3 Years on Site	
	Server Make	International OEM Make only with at least 4% share in top 500.ORG	

2	Server:	Compute Node	4
	Processor	4 X 16 Core processors AMD Opteron™ 6274 (2.2GHz/16-core/16MB/115W) Processor or higher	
	Cache	16MB shared L3 cache per processor or higher	
	Memory	Min 128 GB PC3-10600R Registered DDR3 (1333MHz) Memory upgradeable to 512 GB	
	Memory Features	Advanced ECC with Online spare Memory feature	
	Network Controller	4 Port Integrated Multifunction Gigabit Server Adapter	
	Storage Controllers	6G SAS Controller with 512 MB Flashed Backed Write Cache upgradable to 1GB. Controller should be capable of online scan and remap of bad sectors to ensure data integrity. Controller should support raid 0, 1, 1+0, 5, 5+0,6	
	Storage Bays	Support for upto 8 SFF SAS, SFF SATA Hard Disk Drive bays capable of supporting hot plug Hard Drives.	
	Hard Disk Drive	2x 300GB 6G SAS 2.5" 10k Hot Pluggable SFF Hard Disk Drive	
	Graphics	Integrated with 32 MB DDR1 memory	
	Form Factor	4 U Rack Mountable	
	Manageability	Dedicated Hardware Controller based Management. Management port should support record/playback, shared remote consol for minimum 6 users simultaneously	
	Manageability Features	Should be able to manage systems through a web-browser, OEM to provide its own systems management software.	
	Warranty	3 Years on Site	
	Server Make	International OEM Make only with at least 4% share in top 500.ORG	
	Installation	Software: - Linux OS for All nodes, x86 Open64 Compiler Suite / Intel Compiler Suite (Fortran, C++), MPI, Open MP, System Management Software, Open Source Job Scheduler Software	
		Cluster: - Cluster set up, Loading software and full cluster commissioning so that it is ready for running application at our LAB.	

Continued…

3	Infiniband Controller	4X QDR Infiniband Controller Dual Port PCI-e with required Cables for above Servers (from the same OEM as of Server), Warranty 3 Year On Site	5
	Infiniband Switch	4X QDR Port based Rack Mount switch with Rack mount Kit with minimum 16 Ports Warranty 3 Year On Site	1
	Ethernet Switch	48 RJ-45 auto-negotiating 10/100/1000 ports , 4 SFP 1000 Mbps ports , Supports a maximum of 48 autosensing 10/100/1000 ports plus 4 1000BASE-X SFP ports, or a combination. 1000 Mb Latency < 5 µs , Throughput 77.4 million pps, Routing/Switching capacity 104 Gbps, Routing table size 32 entries, Miercom certified Green. Of Same OEM as of Server	1
	Ethernet Cables	CAT 5/6 5Mtr cables with RJ45 connectors	20
	Infiniband Cables	QDR Copper QSFP Cables, 3Mtr	10

4	Operating System	Rhel 6.x 2 Socket Single Guest with 1 Year Support	1
		Rhel 6.x 4 Socket Single Guest with 1 Year Support	4

5	KVM	1 U KVM (Monitor/ Keyboard/Mouse) (Of Same OEM as Of Server)	1
	Rack	36 U or higher Rack with required Accessories (of same OEM as Of Server)	1

Subrata Sarkar