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|  | **Department of Aerospace Engineering**  Indian Institute of Technology Madras  Chennai – 600 036, India | |
| **Dr. SUNETRA SARKAR**  PROJECT COORDINATOR | |  |

**Ref :**ASE/Tender/2018-19/SS/Cluster **Dated :**17.12.2018

**Due date:03.01.2019**

Dear Sir,

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 reference no. and due date, should be addressed to the undersigned so as to reach him or before the due date stipulated above.
3. Quotations should be valid for 60 days from the due date and period of delivery be indicated.
4. Imported supplies should be quoted for CIF Madras
5. Local firms to quote for free delivery to this Institute. If quoted for Ex-Godown delivery charges are indicated separately.
6. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the Quotations, wherever applicable. Samples / machine/ equipment if called for should be submitted / demonstrated at free of charges, and collected back at the supplier’s expenses. Compliancy certificate is to be provided indicating conformity to the technical specifications
7. Sales Tax/General Taxes/ED/GST if applicable and such other taxes legally legible and intended to be claimed should be distinctly shown along with the price quoted. If this is not indicated no such claim will be admitted at any stage. Thetaxes legible 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 is given. Sales Tax Certificate will be issued at the time of final settlement of the bill.
8. Goods should be supplied carriage paid and insured.
9. Goods shall not be supplied without an official supply order.
10. If the item is under DGS&D Rate contract No. 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 (Please note that we are not Direct Demanding Officers). If so please send copy of the RC.
11. **Every effort will be made to make payment within 30 days from the date of bill/acceptance of goods whichever is later**.
12. The Guarantee period of the item may be indicated clearly.
13. In case of LC. Payment 90% of the payment will be made after completion of the supply. The balance 10% of the payment will be made after satisfactory installation of the equipment.
14. IIT Madras is exempt from payment of Excise Duty and is eligible for concessional rate of custom duty/GST. Necessary certificate will be issued on demand. IIT Madras will make necessary arrangements for the clearance of imported goods at the Airport/Seaport. Hence the price should not include the above charges.
15. Acceptance and Rejection- I.I.T. Madras has the right to accept the whole or any part of the Tender or portion of the quantity offered or rejects it in full without assigning any reason.
16. Fax and Email quotations are not acceptable.

Yours faithfully,

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**Dr. SUNETRA SARKAR**

PROJECT COORDINATOR

Items required:**CLUSTER**  as per specifications enclosed.

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­­­­­­­­­­­­­­­­­­­­Phone Nos.: (044) 2257 4024/ 5000, FAX: (044) 2257 4002, E-mail: sunetra@iitm.ac.in

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| **Master Node Specification** | |
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| **Item Name** | **Descriptions** |
| CPU | 2 x Intel Gold 6130 processor 16C, 2.10 GHz, 22 MB |
| Chipset | Intel® C624 chipset or Higher |
| Memory populated | 96GB (12\*8GB) 2666 MHz DDR4 RECC DIMMs ,  with 24 DIMM slots scalability up to 3072 GB |
| Storage Disk | 8nos of 1200 GB SAS 12G 1.2TB 10K 512n HOT PLug |
| Media | DVD-RW SuperMulti ultra slim SATA |
| RAID Controller | PRAID EP400i support SAS/SATA HDD and SSD - RAID Levels 0, 1, 10, 5, 50, 6, 60 - 1GB Cache |
| LAN Network | 4nos of 1Gigabit (RJ45) Ethernet Ports |
| PCI Express slots | 3nos of PCI-Express 3.0 x8 3 x Low profile  3nos of PCI-Express 3.0 x16 3 x Low profile |
| Power Supply | Redundant 800W modular Power Supply Module , hot plug, platinum (94% efficiency), Turbo Mode |
| Fans | 6 nos. of fans (Redundant / Hot-plug) |
| Management controller | Dedicated 1G port for management  Integrated Remote Management Controller (iRMC S5 with 512 MB memory incl. graphics controller) IPMI 2.0 compatible |
| Management Software | Management software should have below features as standard or if any license is required for below features should be provided. |
|  | ·         System management tools should be from the same OEM |
|  | ·         Should support Unattended, Local and Remote installation. |
|  | ·         Event Management, Threshold management, Asset Management, Performance Management. |
|  | ·         Prefailures and analysis, Automatic System Recovery and restart. |
|  | ·         Monitoring and control power consumption |
|  | ·         Raid Management, Storage management |
|  | ·         Update Management (Bios and Firmware), Online Diagnostics |
|  | ·         Single sign on and Role based access control should be provided. |
|  | ·         Power consumption Monitoring, Power Consumption Control should be provided. |
|  | ·         Power Consumption history for atleast 1 year should be available |
|  | Dirvers and Firmwares should be available for free till the complete life of the server |
| Operating System Support | Microsoft windows 2016, RHEL, SUSE, Microsoft Hyper-V, Oracle supported |
| Compliance | ROHS, WEEE, CSAc, FCC Certified |
| OEM Status | Among FORTUNE’s top 500 global companies |
| Form Factor | 2U or better form factor |
| Rack mount kit | Should provide rack mounting kit and Rails to mount the server on RACK |
| Operating Temperature | 5 °C to 45 °C |
| Warranty | 3 Years Onsite Next Business Day Recovery |

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| **Compute Node Specification** | |
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| **Item Name** | **Descriptions** |
| CPU | 2 x Intel Gold 6130 processor 16C, 2.10 GHz, 22 MB |
| Chipset | Intel® C624 chipset or Higher |
| Memory populated | 96GB (12\*8GB) 2666 MHz DDR4 RECC DIMMs ,  with 24 DIMM slots scalability up to 3072 GB |
| Storage Disk | 1nos of 1200 GB SAS 12G 1.2TB 10K 512n HOT PLug |
| Media | DVD-RW SuperMulti ultra slim SATA |
| RAID Controller | PRAID EP400i support SAS/SATA HDD and SSD - RAID Levels 0, 1, 10, 5, 50, 6, 60 - 1GB Cache |
| LAN Network | 4nos of 1Gigabit (RJ45) Ethernet Ports |
| PCI Express slots | 3nos of PCI-Express 3.0 x8 3 x Low profile  3nos of PCI-Express 3.0 x16 3 x Low profile |
| Power Supply | Redundant 1200W modular Power Supply Module , hot plug, platinum (94% efficiency), Turbo Mode |
| Fans | 6 nos. of fans (redundant / Hot-plug) |
| Management controller | Dedicated 1G port for management  Integrated Remote Management Controller (iRMC S5, 512 MB attached memory incl. graphics controller) IPMI 2.0 compatible |
| Management Software | Management software should have below features as standard or if any license is required for below features should be provided. |
|  | ·         System management tools should be from the same OEM |
|  | ·         Should support Unattended, Local and Remote installation. |
|  | ·         Event Management, Threshold management, Asset Management, Performance Management. |
|  | ·         Prefailures and analysis, Automatic System Recovery and restart. |
|  | ·         Monitoring and control power consumption |
|  | ·         Raid Management, Storage management |
|  | ·         Update Management (Bios and Firmware), Online Diagnostics |
|  | ·         Single sign on and Role based access control should be provided. |
|  | ·         Power consumption Monitoring, Power Consumption Control should be provided. |
|  | ·         Power Consumption history for at least 1 year should be available |
|  | Dirvers and Firmwares should be available for free till the complete life of the server |
| Operating System Support | Microsoft windows 2016, RHEL, SUSE, Microsoft Hyper-V, Oracle supported |
| Compliance | ROHS, WEEE, CSAc, FCC Certified |
| OEM Status | Among FORTUNE’s top 500 global companies |
| Form Factor | 2U or better form factor |
| Rack mount kit | Should provide rack mounting kit and Rails to mount the server on RACK |
| Operating Temperature | 5 °C to 45 °C |
| Warranty | 3 Years Onsite Next Business Day Recovery |

**Manufacture Eligibility:**

1. Quoted OEM should have a minimum of 10 HPC Installation in Top500 list published in November 2018. (top500.org)
2. OEM should have minimum 3 Installation listed in Indian Supercomputer list publisher in July 2018, (<http://topsc.cdacb.in/>)

**Bidder Eligibility:**

1. Bidder should have minimum 10 years of Experience in HPC Business. Proof of Purchase Order along with successful installation report must be submitted
2. The Bidder should have registered support office with minimum 2 dedicated HPC Engineer capable of handling all HPC relevant issues. Necessary proof of employment should be submitted along with Certification if any.

**Dr. SUNETRA SARKAR**

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