05.03.2021

Department of Civil Engineering

Corrigendum-2

Tender Reference no: **CE/2021/IOECOE/036/HPCNODES**

Name of the Item: **HPC Nodes**

Corrigendum details: Changes in Technical specification and Extension of bid submission date.

Extension of bid submission date:

The due date for the submission of bids has been extended to 12/03/2021 @ 3 PM & the technical bid opening is 12/03/2021 @ 4 PM

Changes in Technical specification:

Requirements: The development of A high-performance computing cluster is proposed at IIT Madras. The proposed cluster will be a collection of several state-of-the-art servers connected through an infiniband interconnect. In the following, detailed technical specifications required for developing such a facility are listed:

HPC Head Node: Procurement of 1 head node is proposed with the specifications listed as follows:

S. No.	Parameters	Quantity	Values/Notes
1.	Processor	2	Intel Xeon Gold 5218R 2.10GHz 20 Core 27.5MB
2.	Memory	4	32GB DDR4 ECC-Registered 2933MHz Memory
3.	Power Supply	1	2U Chassis with 1000W Redundant Power Supplies Platinum level or higher efficiency
4.	Socket Board	1	Dual Socket Board supports Intel Xeon Skylake processor
5.	Storage	7	Enterprise Class 10TB SATA HDD
6.	Storage	1	480 GB Enterprise Class SSD
7.	Raid Controller	1	8-port Raid Card

S. No.	Parameters	Quantity	Values/Notes
8.	Support and Maintenance	1	3 years on-site warranty
9.	Interconnect	1	Infiniband EDR 100 GB 1-port adapter with accessories

HPC Compute Nodes: Procurement of 8 compute nodes is proposed with each compute node having the specifications listed as follows:

S. No.	Parameters	Quantity	Values/Notes
10.	Processor	2	Intel Xeon Gold 5218R 2.10GHz 20 Core 27.5MB
11.	Memory	4	32GB DDR4 ECC-Registered 2933MHz Memory
12.	Power Supply	1	1U Chassis with 750W Redundant Power Supplies Platinum Level high efficiency
13.	Socket Board	1	Dual Socket Board supports Intel Xeon Skylake processor
14.	Storage	1	Enterprise Class 5 TB SATA HDD
15.	Support and Maintenance	1	3 years on-site warranty
16.	Interconnect	1	Infiniband EDR 100 GB 1-port adapter with accessories

HPC Compute Nodes: Procurement of 4 compute nodes is proposed with each compute node having the specifications listed as follows:

S. No.	Parameters	Quantity	Values/Notes
10.	Processor	2	Intel Xeon Gold 5218R 2.10GHz 20 Core 27.5MB
11.	Memory	4	32GB DDR4 ECC-Registered 2933MHz Memory
12.	Power Supply	1	2U Chassis with 1000W Redundant Power Supplies Platinum Level or higher efficiency
13.	Socket Board	1	Dual Socket Board supports Intel Xeon Skylake processor
14.	Storage	1	Enterprise Class 5 TB (or higher) SATA HDD Provision for 8 slot storage (expandable to 8x TB)
15.	Support and Maintenance	1	3 years on-site warranty
16.	Interconnect	1	Infiniband EDR 100 GB 1-port adapter with accessories

Interconnect: Infiniband switch

17.	Infiniband switch	1	24 Port 100Gbps Infiniband Switch with Dual Power Supply and unmanaged Switch with 3 years support Refurbished acceptable. Higher number of ports acceptable pending cost considerations – lower preferred.

Other specifications:

18.	Supplier Capability		1. OEM (Manufacturer) should have at least 5 HPC installations in latest listing of Top 500 supercomputer list. 2. The bidder (systems integrator) should have installed and implemented 5 HPC clusters within the last 3 years with a minimum size of 5 nodes each along with infiniband. The PO's and installation reports of those installations should be furnished.

				3. The bidder (systems integrator) should submit the authorization letter from the OEM's. OEM should authorize only one bidder & the bidder also bid only one OEM product.
				4. The bidder (system integrator) should have technical expertise in implementing cluster, which includes installation configuration, maintenance and customization as per requirement. The details of the engineers should be furnished together with the technical bid.
				5. The Bidder/System Integrator should have minimum 3 years of Experience in HPC Business and Proof of Order has to be submitted
				6. The Bidder should have Support office in Chennai and HPC Engineer Details should be Furnished
				7. Bidder/OEM should have done at least 1 installation of 50TF of Sustained HPC performance
				8. Bidder should propose the Technical Presentation post the bid submission to prove their technical capability.
				9. The firm must provide a self-declaration that there is no complaint/vigilance inquiry against them in any Govt./Department /PSU and they have not been black listed by any Govt. Department/PSU
				10. The bidder should integrate the following list of applications (but not limited to) with the system
				1. Open source compilers (gcc, g++, gfortran, python)
				2. Intel Compilers for C++ and Fortran
				3. Open source software: ParaView, VIsIt, GVim, EMacs, Octave, Scilab, MPI, OpenMP, Gnuplot, Gaussian, realVNC (or equivalent) for remote access
				11. Commercial Software (the required licenses will be provided by IITM): Ansys, Abaqus, MATLAB, COMSOL, Mathematica

Tender Inviting Authority:
The Senior Manager, Project Purchase,
I.I.T. Madras, Sardar Patel Road, IC & SR Building, 2nd floor,
Chennai – 600 036