



**NATIONAL INSTITUTE OF TECHNOLOGY  
ROURKELA-769008 (ODISHA)**

An Institute of National Importance under Ministry of HRD, GOI

**NOTICE INVITING TENDER**

**Tender Notification No: NITR/PW/CY/2019/132**

**Dated: 09/07/2019**

The National Institute of Technology, Rourkela invites bids from the eligible bidders for procurement of **High performance computing cluster solution** at NIT Rourkela.

**Last date of Submission of Bid : 05/08/2019 at 11:00 AM**

**Date of opening of techno-commercial Bid : 06/08/2019 at 11:00 AM**

**For Details:** [http://nitrkl.ac.in/OldWebsite/Jobs\\_Tenders/9Equipment/Default.aspx](http://nitrkl.ac.in/OldWebsite/Jobs_Tenders/9Equipment/Default.aspx)

**Contact:** Dr. Madhurima Jana, Department of Chemistry; Ph: +91-661-2462663;

Email: [janam@nitrkl.ac.in](mailto:janam@nitrkl.ac.in)

Bidding through: <https://eprocure.gov.in/eprocure/app>

**sd/-  
REGISTRAR**



**NATIONAL INSTITUTE OF TECHNOLOGY  
ROURKELA-769008, ODISHA**

**(OPEN TENDER NOTICE NO.: NITR/PW/CY/2019/132**

**dated: - 09/07/2019)**

**(Procurement of High performance computing cluster solution)**

<b>Item No</b>	<b>DESCRIPTION</b>	<b>Quantity</b>
1	High performance computing cluster solution	1 Unit

1. Quantity required : **As mentioned above (All information regarding technical specification provided in the Annexure-I)**
2. Delivery : Within **90 days** from the date of purchase order
3. **Last Date of submission of Tender : 05/08/2019 at 11:00 AM**
4. **Date of opening of techno-commercial bid : 06/08/2019 at 11:00 AM**
5. The firm should not have been black listed at any time.
6. The submission of following bids by the tenderer should be through <https://eprocure.gov.in/eprocure/app>. Please follow the guidelines as per the portal.

**Procurement of High performance computing cluster solution**

**(Open Tender Notice No.: NITR/PW/CY/2019/132 dated: 09/07/2019) Due on 05/08/2019 at 11:00 AM**

7. **Liquidated damage clause** will be charged for any delay in supply of goods.
8. The validity of the tender shall be **90 days** from the date of opening of the bids.
9. Detailed advertisement including all tender documents is also available in our website at [http://nitrkl.ac.in/OldWebsite/Jobs\\_Tenders/9Equipment/Default.aspx](http://nitrkl.ac.in/OldWebsite/Jobs_Tenders/9Equipment/Default.aspx) .
10. NIT reserves the right to qualify or deny prequalification of any or all applicants without assigning any reasons.

**(REGISTRAR)  
NIT, Rourkela  
Fax No- 0661-2462022  
Ph. No -0661-2462021**

<b>A. Detailed specifications of the Equipment High Performance Computing (HPC) Cluster Solution</b>		
<b>I. Master Node (Qty. 1)</b>		
1.	Processor	2 x Intel® Xeon® processor Scalable SKL-SP 6140 18C/36T 2.3G 24.75M 10.4GT UPI
2.	Memory	128 GB DDR4-2666 ECC RDIMM
3.	HDDs	8 TB Hot-swap SATA Drive , configured as RAID (hardware RAID)
4.	RAID	On Board SW Raid - RAID 0,1,10
5.	Gigabit Ethernet	Intel® i350 Dual Port Gigabit Ethernet with suitable cable(s),
6.	Optical	Internal DVD RW drive
7.	Chassis	2U Rack Mountable chassis with sliding railkits
8.	Graphics	ASPEED AST2500 BMC
9.	Management	IPMI 2.0 compliant with dedicated port. Supports KVM over LAN and Virtual Media redirection, Nuvoton WPCM450 BMC
10.	PCI	As per manufacturing specifications and requirements
11.	Cooling Fan	Inbuilt cooling fan/ Hot pluggable will be acceptable
<b>II. Computing Node Architecture (Common features for all nodes): 4 nodes</b>		
12.	Processor	2 x Intel® Xeon® processor Scalable SKL-SP 6140 18C/36T 2.3G 24.75M 10.4GT UPI
13.	Memory	128 GB DDR4-2666 ECC RDIMM
14.	HDDs	1 x 1000 GB Enterprise SATA,SATA Support, 3x Hot-swap SATA Drive Bays.
15.	Gigabit Ethernet	Intel® i350 Dual Port Gigabit Ethernet with suitable cable(s),
16.	Management	IPMI 2.0 compliant with dedicated port. Supports KVM over LAN and Virtual Media redirection, Nuvoton WPCM450 BMC
17.	PCI	As per manufacturing specifications and requirements
18.	Port connectivity	Minimum of 1 * internal USB 2.0 port
19.	Power supplies	2200W Redundant Power Supplies Titanium Level (96%)
<b>III. Miscellaneous Hardware and Software</b>		
20.	Management suit	Should be possible to manage the servers and get access to critical information about the health of the server from any remote location with just the help of a standard Web browser (Internet Explorer).
21.	Remote system management	Hardware based and OS independent remote management. Remote management should support remote power on/off of the server and should have the capability to boot the server from a remote floppy or CDROM drive or an image of the same.

22	Extra features	If the vendors provide anything extra on hardware or software that should be highlighted clearly
<b>IV. Softwares and Compiler to be Installed for HPC</b>		
23	Software suit and compilers	<ul style="list-style-type: none"> <li>Compilers including parallel version, development tools like debuggers &amp; profilers including parallel version and libraries for MPI based programming.</li> <li>Parallel NAMD, AMBER, GROMACS, GAUSSIAN09, LAAMPS software should be installed.</li> <li>Open source suitable Cluster Management Software for Cluster management and provisioning</li> </ul>
24	LAN access	System should be integrated with instate LAN for operation and user access.
<b>B. Warrantee</b>		
25	Period	3-year Parts, 3-year labour, 3-year on-site Supports
<b>C. Support</b>		
26	3 year remote telephone support for system administration and at most three physical supports per year.	
27	Post-sell service	The vendor must submit the names of the service engineers employed by them who are competent to service the HPC installation along with their contact details in India
<b>D. Training</b>		
28	Training at NIT, Rourkela	Administrator training for system administration and training for HPC programming using MPI libraries for users.
<b>E. Other Requirements</b>		
29	<p>Installation and system integration</p> <ul style="list-style-type: none"> <li>The vendors should give an estimate of the time required for installation, fine-tuning of the cluster and hand-holding/training of the principal users in the technical bid. The installation should be done in the existing rack of an existing HPC cluster.</li> <li>User quota setting for the NFS mounts</li> <li>Entire HPC setup and running sample programmes for testing the HPC</li> <li>User hand holding documentations</li> </ul> <p><b>Installation and Commissioning:</b> Free of cost at NIT Rourkela. The vendors are required to give an estimate of the time required for installation fine-tuning of the cluster and hand-holding/training of the principal users in the bid. The vendors will be responsible for setting up of High Performance Linux Cluster based on Enterprise Linux OS or equivalent (to be provided by vendor). It will be highly desirable if the vendor has proven capability to install some commonly used open-source scientific software.</p>	

	<p><b>Compliance List:</b> The vendor must submit a technical brochure and proper application notes adequately explaining and confirming the availability of the features in the components quoted.</p> <p>The vendor must also submit a table indicating the compliance of the features of the model of the components being quoted with those given in the indent. In case of non-compliance against a particular item, the vendor should justify that.</p> <p>Additional features in the quoted items which are better than those in the indent – may be highlighted</p> <p><b>Details of the configuration and deviation must be provided along with technical bid.</b></p>
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**Other Qualification Criteria:**

1. At least 5 contacts from IIT/ NIT/IISER/reputed Indian institute/Govt. R&D organizations must be provided where the above equipment and accessories (**Annexure-I**) have been supplied in last five years. Scan copies of the minimum five purchase orders of the above equipment and accessories (**Annexure-I**) must be enclosed along with the technical bid.
2. The bidder must have infrastructure support in the form of direct service centers at Kolkata/Bhubaneswar/Raipur/Rourkela. The bidders must enclose details of their infrastructure with reference to locations and technical manpower, availability of inventory spares etc.
3. Scanned copies of the technical brochure of the above equipment and accessories (**Annexure-I**) given in the quotation must be included in the technical bid.
4. Web references must be provided along with the technical bid.
5. Pointwise technical compliance along with any deviation of the mentioned specifications (**Annexure-I**) must be indicated along with technical documents.
6. Make and model no. should be mentioned in the technical bid.

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