



**INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR
KHARAGPUR – 721302**

SUB: PROCUREMENT OF HIGH PERFORMANCE CPU SERVERS

Tender Notice No. IIT/EE/OTG/SM/EQ/2018-19/02 Date: 10.10.2018

Indian Institute of Technology Kharagpur, an Institute of National Importance, invites sealed quotations from reputed Original Equipment Manufacturers (OEMs) or their Authorized representatives & General Suppliers for the supply of **HIGH PERFORMANCE CPU SERVERS** for the Indian Institute of Technology Kharagpur.

Interested vendors are requested to send their sealed bids under a **two cover system** as per requirement mentioned in tender document, along with the Technical Specifications & Compliance Certificate (as mentioned in **Annexure – I**) of the tender document.

Details are also mentioned in the Institute website www.iitkgp.ac.in [link: **Tenders**].

The final quotation for consideration is to be sent in a sealed packet, containing two separate sealed envelopes (**Technical Bid** and **Price Bid**) duly superscripted with Reference Number (**Tender Notice No. IIT/EE/OTG/SM/EQ/2018-19/02 Date: 10.10.2018**) to the Office of Prof. Siddhartha Mukhopadhyay, Department of Electrical Engineering, IIT Kharagpur, P.O. Kharagpur Technology, PIN: 721 302 **on or before 09.11.2018 at 3.00 pm.**

The **technical bids will be opened on 09.11.2018 at 4.00 pm in the Office of Prof. Siddhartha Mukhopadhyay, Department of Electrical Engineering, IIT Kharagpur** in the presence of the vendors/ or their authorized representatives and price bids will be opened (to be notified separately), only of those firms, who will be found technically qualified/short listed, after evaluation of their technical bids.

**Prof. Siddhartha Mukhopadhyay
PI, CNE_OTG, IIT Kharagpur**

Encl: **Annexure – I & II**

Copy to:

- 1. Institute website**
- 2. Jt. Registrar (Stores & Purchase)**
- 3. CPP Portal**
- 4. Chairman, Purchase Committee**
- 5. Notice Board**

Procurement of High-Performance CPU Servers for Indian Institute of Technology Kharagpur

It will consist of following components as per the specification given in **Annexure I**.

SN.	Equipment		Quantity
1	Server A		05
2	Server B		01
3	10G/40G SFP+ Open Switch (OpenFlow Supported)		04
4	10G Ethernet Switch		01
5	KVM switch		01
6	19" monitor	Required for connecting to the KVM switch to monitor all the servers (should not be rack integrated).	01
	Keyboard		01
	Mouse		01
	42U Rack		01

SCOPE OF WORK

1. Delivery of all mentioned equipment at IIT Kharagpur campus.
2. The bidder must install the entire connection including all hardware and software installations as per specifications given in Annexure-1. The CPU servers will be connected to each other through Ethernet switch. The Servers will be connected to the external network (Workstations) through the Ethernet switch as shown in **Fig. 1**. The supplied servers should be mounted on space on 42U Rack. Bidder must provide all necessary cables (network and power) and other accessories for installing and connecting the equipment supplied.
3. Bidder to ensure that the hardware and software components are compatible with each other, and provide all necessary cables, mounting rails and any other accessories, hardware or software, necessary for connecting and installing the supplied components. No additional cost will be paid for this during or after installation.
4. The bidder must demonstrate the operation and functionality of all the supplied equipment as per the connectivity diagram depicted in **Fig. 1** including operating system, and workload management software.
5. All the **SERVERS** and **SWITCHES** should be from the same OEM.

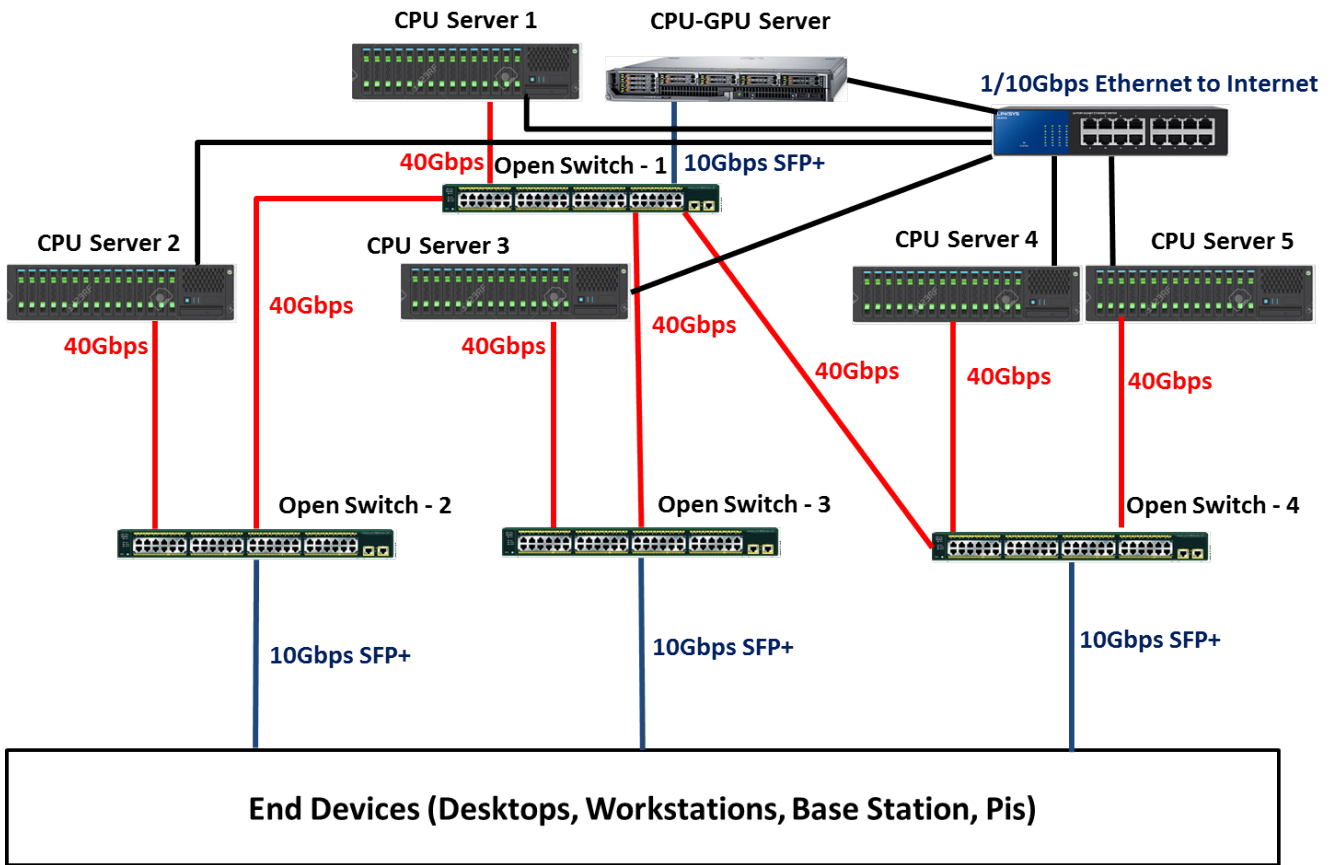


Fig. 1: Connectivity Diagram

Annexure – I

1. Server A – 05 nos.

SN.	Components	Minimum Required Specifications
1	Processor	2 x Intel Xeon Gold 6000 series processor, each having 22 Cores (or higher), 30.25 MB L3 Cache (or higher), 3.70 GHz base frequency (or higher)
2	Chipset	Intel C620 Series chipset
3	Memory	256 GB memory should be 2400 MHz or higher registered ECC DDR4, scalable to minimum 1 TB memory
4	Expansion	Minimum 2 USB 3.0 slots and minimum 3 USB 2.0 slots or higher
5	Storage	5 TB usable (uncompressed) in RAID 5 with 10K RPM hot swap SFF SAS DISK.
6	Optical Drive	Internal DVD RW drive
7	Network	2 x 40Gbps SFP+ with fiber module, 2 x 10Gbps SFP+ with MMF module, 2 x 1GBASE-T ports
8	Management	Remote Management with IPMI 2.0., dedicated management port, Must provide server management software to remotely manage the server, Software must be from the same OEM.
9	Power Supply	Minimum 2 x 750W 80 PLUS Platinum hot-plug with minimum 90% efficiency power supplies with hot-plug redundant fans
10	Chassis	2U Rack Mountable or lower
11	Operating Systems	Ubuntu 16.04 or higher

2. Server B – 01 no.

SN.	Component	Minimum Required Specifications
1	Processor	2 x Intel Xeon Gold 6000 series processor, each having 22 Cores (or higher), 30.25 MB L3 Cache (or higher), 3.70 GHz base frequency (or higher)
2	Chipset	Intel C620 Series Chipset
3	Memory	256 GB memory should be 2400 MHz or higher registered ECC DDR4, scalable to minimum 1 TB memory
4	Expansion	Minimum 2 USB 3.0 slots and minimum 3 USB 2.0 slots or higher
5	Storage	5 TB usable (uncompressed) in RAID 5 with 10K RPM hot swap SFF SAS DISK.
6	Optical Drive	Internal DVD RW drive
7	Network	2 x 10Gbps SFP+ Fiber Port along with transceiver, 2 x 10GBASE-T ports

8	GPU	2 x NVIDIA Tesla P100, each with 12 GB memory
9	Management	Remote Management with IPMI 2.0., dedicated management port, Must provide server management software to remotely manage the server, Software must be from the same OEM.
10	Power Supply	Minimum 2 x 1200W 80 PLUS Platinum hot-plug redundant power supplies with hot-plug redundant fans
11	Form Factor	2U (or lower) rack-mount with rail-kit and other required accessories
12	Operating System	Ubuntu 16.04 or higher

3. 10G/40G Downlink/Uplink SFP+ Open Switches with OpenFlow support – 4 nos.

SN.	Minimum Required Specifications
1	Switch architecture should be fixed form factor fitting 19" ETSI rack.
2	Switch should have minimum 16 ports of 10G SFP+ ports plus 4 no's of 40G uplink ports. All the ports should be available from Day 1.
3	Should support min 4GB of system memory and 32GB SSD drive or higher
4	Should support buffer memory of 16MB or higher
5	Power consumption should 200W Watt or less
6	Should support SDN integration with support for OpenFlow protocol v1.3 or higher
7	Switch should have internal redundant power supplies and fans from day one.
8	Should support throughput of min 500 Mbps to ensure non-blocking wire speed performance on all ports.
9	<u>Must support following L2 features -</u> Port mirroring, sflow for traffic monitoring, Min 80k MAC address table Jumbo frame support (9216 bytes), 4000 VLANs , STP, MSTP, RSTP, PVRST BPDU filter, root guard, BPDU guard, 802.3ad LACP, Min 2000 ACL's in hardware, 802.3x Flowcontrol, LLDP, IGMP snooping
10	<u>Must support following L3 features -</u> VLAN routing, Static routes, OSPF, BGP, VRRP, ECMP, PIM Routing table size - 200k or higher IPv4 routes in hardware
11	Should support datacenter features like - Data center bridging 802.1Qbb Priority Flow Control (PFC) 802.1Qaz Enhanced Transmission Selection (ETS)
12	Remote software download and configuration backup shall be possible via network management system without traffic interruption.
13	Should support SSHv2

14	Should support standard CLI and Web GUI
15	Should support SNMP v1, v2, v3
16	Should support syslog, telnet, NTP, DHCP relay,

4. 10G/10G Downlink/Uplink Ethernet Switch – 01 no.

SN.	Components	Minimum Required Specifications
1	Port Configuration	16 no. of 10 Gbps port or higher
2	Management	Web-based management interface; BootP/DHCP IP address management or Static IP address assignment.
3	Security	Switch access password protection (read-only and read-write access).

5. KVM Switch - 01 no.

Rack mountable, 16 port or higher Analog USB KVM Switch, with all necessary cables to connect the equipment supplied in this tender

Analog KVM specifications :	
SN.	Minimum Required Specifications
1	It should have a minimum of 16 ports
2	Connect computers via PS/2 and/or USB.
3	Supports Linux and Windows operating systems
4	On-Screen-Display (OSD) & Cascade Chain functions.
5	OSD with intuitive menus for quick and effective navigation.
6	Advanced user profiles and configurable OSD hot key combinations
7	Support resolution up to 1920 x 1080
8	From a single console. Cascaded units do not need special configuration.
9	Hot-pluggable: all devices connected to KVM can be added or removed at any time without shuttingdown the devices.
10	Auto Scan video for effortless monitoring
11	Easily switch between connected devices with: Hardware Push Button, Hot-Keys on PS/2 and/or USBkeyboard, OSD menu.
12	Supports LED display for PC and/or server status monitoring.
13	Supports video resolutions Up to 1920 x 1080 / 1920 x 1200 when collecting to FHD 17" panel
14	Enable/disable beeper during channel switching.
15	Racks mountable in 19" rack (1U).

6. Rack, Monitor, Keyboard and Mouse - 1 no. each

Items	Minimum Required Specifications
Rack Console	19 inch or higher LED monitor, USB keyboard, USB mouse (need not be rack integrated)
Rack	42U, 4 post, 19" width. Rack should have redundant cooling fans and IEC power distribution unit with front and rear doors with lock. The dimensions of the rack must be compatible with all the equipment supplied in this tender. Bidder must provide all necessary cables (network and power) and other accessories for installing and connecting the equipment supplied. The dimensions of the rack must be compatible with all the equipment supplied in this tender.

GENERAL TERMS AND CONDITIONS

1. All licenses must be perpetual with free upgrades for the entire warranty period. All updates of licensed software components must be provided free of cost for the entire warranty period.
2. The bidder should be ISO certified by ISO 9001 and ISO 27001.
3. The bidder should be Original Equipment Manufacturer (OEM) or authorized distributor of the systems (Attach documentary proof). The authorization letter issued by the OEM (specifically against this tender) should be enclosed. If the OEMs for some of the equipment are different, authorization letters must be enclosed for each OEM.
4. Any service request must be attended to within the next business day. Both the bidder and the OEM must have sales and support service centers in Eastern India. The bidder should provide the locations of sales and support service center of both the bidder and the OEM in India. If the OEM will provide first level support for some equipment, certification to this effect from the OEM must be provided.
5. The bidder must have installed least 5 installations of 5 servers or more with at least 3 orders of > 25 Lakhs or more (PO Copies or successful completion certificates to be provided).
6. Technical bid should contain all relevant technical details; printed technical leaflet of models quoted and other details, which may be necessary to ensure that the offer is complete in all respect e.g. technical specifications, etc.
7. Technical bid should also contain a Compliance Certificate duly signed by the bidder.
8. Price should be **quoted only in Indian Rupees** on free delivery at site **inclusive of all taxes and incidental charges**. The unit price without tax and the tax breakups should be shown separately for each item. Prices for software components, if any, must be shown as separate line items.
10. IIT Kharagpur is registered under DSIR, Govt. of India. GST rate for scientific goods is 5% as per the Notification No. 47/2017 - Integrated Tax (Rate) dated 14th November, 2017. Necessary certificate in this regard will be issued as per requirement and on request of the successful bidder.
11. IIT Kharagpur is eligible for exemption for payment of Customs Duties in terms of Government of India Notification No.51/96 - Customs dated 23.07.96. Necessary certificate in this regard will be issued as per requirement and on request of the successful bidder.
12. All items should be supplied and installed as a turn-key project. L1Bidder will be decided based on the **Grand Total** of prices of all items mentioned in the specification.
13. Payment Terms:90% Payment shall be made after successful installation of the Equipment/System duly certified by PI, CNE_OTG. Balance 10% may be released against submission of Performance Bank Guarantee to the tune of 10% of the total purchase order value. The Performance Bank Guarantee shall be issued from any Commercial Bank, validity of which shall be five years plus 60 days drawn on any commercial bank.
14. Warranty: 5 years Comprehensive onsite OEM warranty, from the date of successful installation of the equipment. The selected bidder will ensure the availability of services from professionally qualified team during implementation and to provide the onsite comprehensive warranty for FIVE YEARS on all items. All products should have 5 years 8 x

5 x NBD (Next Business Day) support commitment with back-to-back agreement with OEM. In case of equipment failure, IIT Kharagpur should be able to log case with the OEM both through the bidder and directly without bidder intervention. Emergency response team should be available from OEM directly in case of any critical failures.

15. Delivery Period: The equipment should be supplied within 8 weeks from the date of receipt of the Purchase Order.
16. Liquidated Damage: In the event of failure to deliver the stores beyond the specified date, liquidated damages @ 1% per month or part thereof in respect of the value of stores will be deducted, subject to a maximum of 5%; alternately the order will be cancelled and the undelivered stores purchased from elsewhere at the risk and expense of the vendor.
17. Tender Fee: An amount of **Rs 1,000.00** (Rupees One Thousand only) as tender fee (nonrefundable) is to be paid. The payment shall be made by Demand Draft from any Bank in favour of "Indian Institute of Technology Kharagpur", payable at "Kharagpur". Quotation will not be accepted without the Tender Fee. Tender fee should be enclosed separately in an envelope and stapled with the Technical Bid.
18. Earnest Money Deposit (EMD): An amount of Rs. **2,00,000.00** (Rupees Two Lakh only) (Refundable) in the form of Demand Draft drawn in favour of "Indian Institute of Technology Kharagpur", payable at Kharagpur or Bank Guarantee as per format at **Annexure-II** is to be submitted. E.M.D. should be enclosed separately in an envelope and stapled with the Technical Bid document superscribed with the tender no. The validity of the EMD should be 6 (six) months from the date of issue. Any bid without EMD will summarily be rejected. No interest is payable on EMD. EMD will be refunded to the unsuccessful bidder after finalization of the tender process. No interest is payable on Security Deposit. Security Deposit shall be forfeited if the selected vendor fails to execute the contract after receiving the same.
[NOTE: IIT Kharagpur will give exemption for submission of tender fee and EMD who are registered with MSME or Central Purchase Organization or startups as recognized by DIPP as per revised rule 170 of GFR-2017 only. However proper and valid document in this regard must be submitted by the bidders in support of their claim.]
19. Bid Submission: Technical Bid and Price Bid should be submitted in two separate sealed envelopes quoting reference number on the top of the envelope. Technical bid should have a copy of the price bid with costs blanked out. Tender Fee and EMD should be enclosed with the Technical Bid documents, in separate sealed envelopes, stapled with the packet containing Technical Bid documents.
20. Acceptance of Tender: The authority of IIT, Kharagpur reserves the right to accept/reject any or the entire tender bids received without assigning any reason thereof.
21. Conditional offer will not be accepted.
22. Period of validity: Bids shall remain valid for acceptance for a period of 120 days from the date of opening of the price bid. The benefit of downward prices (revision on account of budget/financial policy, tax revision, etc.) should be given to IIT Kharagpur by the selected OEM/vendor.
23. Past performance of the vendors will be judged at the time of Technical Evaluation.
24. The Institute does not bind itself to offer any explanation to those bidders whose technical bids have not been found acceptable by the Technical Evaluation Committee of the Institute.

25. Bidders should enclose the following documents:
- i. Tender Fee.
 - ii. Earnest Money Deposit (EMD).
 - iii. Certificate of Registration/Trade License.
 - iv. PAN number and GST registration number.
 - v. IT returns for the last three years.
 - vi. Copy of product literature technical leaflet, wherever applicable for which the prices have been quoted should invariably be enclosed.
 - vii. Signed copy of the tender document, with company seal, agreeing to the terms & conditions and declaration.
 - viii. Copy of ISO Certification (as necessary).
26. **All tenders are to** be submitted or handed over to the office of **Prof. Siddhartha Mukhopadhyay, Department of Electrical Engineering, IITKharagpur.** The bids (technical and price bids) once submitted shall be the property of the Institute and shall not be returned to the vendor in future.
27. **The person/officer signing** the tender/bid documents should be delegated with an appropriate authority.
28. **Opening of Price Bids :** The Price Bid(s) of only those vendor(s) who are found technically qualified will be opened and the same will be opened before the technically qualified vendor(s). **The date for opening of price bids will be notified separately.**
29. Bidder or his/her authorized representative (with proper authorization letter for opening of technical bids and also for opening of price bids) may choose to be present at the time of opening of Technical Bids/Price Bids.
30. The addendum/corrigendum if any shall be published on Institute's Website and on CPP Portal.
31. The Institute at its discretion may change the quantity at any time before placing the order.
32. Copy of mandatory test reports, national testing/reliability and endurance test reports etc., certified or conducted at the manufacturing site, granted by the bureaus/quality control departments/national testing laboratories, as appropriate, should be enclosed.
33. **DEVIATION FROM SPECIFICATIONS:** It is in the interest of the tenderer to study the specifications in the tender schedule thoroughly before quoting so that, if the tenderer makes any deviations, the same are prominently brought out in the body of the tender. If you need to add any optional items to your system in order to meet our specifications, you are requested to quote for the total including the option required to suit our requirements. Otherwise, your tender will not be considered at all.
34. **GUARANTEE:** The tenderer has to declare that the goods sold to the buyer under this contract shall be of the best quality and workmanship and shall be strictly in accordance with the specifications.
35. **JURISDICTION:** All questions, disputes, or differences arising under, out of or in connection with the contract, if concluded, shall be subject to the exclusive jurisdiction at the place from which the acceptance of Tender is issued i.e. Jurisdiction of KOLKATA HIGH COURT. Acceptance to this effect is also necessary at the time of opening of Technical Bid.
36. **IMPORTANT**
- a) A bid submitted with false information will not only be rejected but also the

OEM/vendor will be debarred from participation in future tendering process.

- b) The OEMs/Vendors need to submit a certificate that they are not currently debarred or blacklisted in IIT Kharagpur for any supplies, products or services, or at present in any national organization or educational institute/university.
- c) In case of any dispute, the decision of the Director of this Institute shall be final and binding on the bidders.
- d) For any query pertaining to this bid document, correspondence be addressed to:
Dr. Debarati Sen,
G. S. Sanyal School of Telecommunications
Indian Institute of Technology, Kharagpur-721 302
debarati@gssst.iitkgp.ac.in
- e) In case the due date for opening tender **happens to be a holiday, the same will be accepted on the next working day.** The timings will however remain unchanged.
Please Note that the Institute remains closed during Saturdays & Sundays.

ANNEXURE – II

MODEL BANK GUARANTEE FORMAT FOR FURNISHING EMD

Whereas(hereinafter called the "tenderer") has submitted their offer dated for the supply of (hereinafter called the "tender") against the purchaser's tender Notice No.

KNOW ALL MEN by these presents that WE of having our registered office at are bound unto (hereinafter called the "Purchaser") in the sum of for which payment will and truly to be made to the said Purchaser, the Bank binds itself, its successors and assigns by these presents. Sealed with the Common Seal of the said Bank this Day of 20

THE CONDITIONS OF THIS OBLIGATION ARE

- (1) If the tenderer withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of this tender.
- (2) If the tenderer having been notified of the acceptance of his tender by the Purchaser during the period of its validity:
 - (a) If the tenderer fails to furnish the Performance Security for the due performance of the contract.
 - (b) Fails or refuses to accept/execute the contract.

WE undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or both the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including 45 days after the period of tender validity and any demand in respect thereof should reach the Bank not later than the above date.

(Signature of the authorized officer of the Bank)

Name and designation of the officer

Seal, name & address of the Bank and address of the Branch