

INDIAN INSTITUTE OF TECHNOLOGY DELHI

Tender Reference No: IITD/CSC(SP-1735)/2018

Date- 13.07.2018

Indian Institute of Technology Delhi is in the process of purchasing following item as per details as given as under.

Notice Inviting Tender

For Supply & Installation of High Performance Computing System at IIT Delhi

Earnest Money Deposit to be submitted is

₹ 30,00,000/- (Thirty Lakhs only)

Tender Documents may be downloaded from Central Public Procurement Portal <http://eprocure.gov.in/eprocure/app>. Aspiring Bidders who have not enrolled / registered in e-procurement should enroll / register before participating through the website <http://eprocure.gov.in/eprocure/app>. The portal enrollment is free of cost. Bidders are advised to go through instructions provided at 'Instructions for online Bid Submission'.

Tenderers can access tender documents on the website, fill them with all relevant information and submit the completed tender document online on the website <http://eprocure.gov.in/eprocure/app> as per the schedule given below:

(Note: Go to Tender search option and choose organization name as "IIT Delhi" and click on the submit button to see the tender details).

Schedule

Tender Reference No.	IITD/CSC(SP-X)/2018
Name of Organization	Indian Institute of Technology
Price of Tender Document	Rs. 10,000 (Rs. Ten thousand only)
EMD Amount	Rs. 30,00,000/- (Rs.Thirty lakhs only)
Tender Type (Open/Limited/EOI/Auction/Single)	OPEN
Tender Category (Services/Goods/works)	Goods
Type/Form of Contract (Work/Supply/ Auction/Service/Buy/Empanelment/ Sell)	Supply
Product Category (Civil Works/Electrical Works/Fleet Management/ Computer Systems)	Information Technology
Re-bid submission allowed (Yes/No)	YES
Is Offline Submission Allowed (Yes/No)	No
General Technical Evaluation Allowed (Yes/No)	No
Withdrawal Allowed (Yes/No)	Yes
Is Multi Currency Allowed	YES (INR or USD only)
Payment Mode (Online/Offline)	Offline
Date of Issue/Publishing	13/07/2018 (17:00 Hrs)
Document Download/Sale Start Date	13/07/2018 (17:00 Hrs)
Document Download/Sale End Date	03/08/2018 (15:00 Hrs)
Clarification Start Date	13/07/2018 (17:00 Hrs)
Clarification End Date	20/07/2018 (12:00 Hrs)
Date for Pre-Bid Conference	20/07/2018 (15:00 Hrs)
Venue of Pre-Bid Conference	Head, Computer Services Center IIT Delhi, New Delhi 110016
Last Date and Time for Uploading of Bids	03/08/2018 (15:00 Hrs)
Date and Time of Opening of Technical Bids	06/08/2018 (15:00 Hrs)
No. of Covers (1/2/3/4)	2
Bid Validity days (180/120/90/60/30)	90 days
Address for Communication	Head, Computer Services Center IIT Delhi, New Delhi 110016
Contact Phone Numbers	(+91)-11- 26596032
Fax Number	(+91)-11- 2658-1058
E-mail Address	hod@cc.iitd.ac.in;

Chairman Purchase Committee
(Buyer Member)

INDIAN INSTITUTE OF TECHNOLOGY, DELHI

Instructions for Online Bid Submission:

As per the directives of Department of Expenditure, this tender document has been published on the Central Public Procurement Portal ([URL:http://eprocure.gov.in/eprocure/app](http://eprocure.gov.in/eprocure/app)). The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

More information useful for submitting online bids on the CPP Portal may be obtained at:

<http://eprocure.gov.in/eprocure/app>

REGISTRATION

- 1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal ([URL:http://eprocure.gov.in/eprocure/app](http://eprocure.gov.in/eprocure/app)) by clicking on the link “[Click here to Enroll](#)”. Enrolment on the CPP Portal is free of charge.
- 2) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- 3) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- 4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.), with their profile.
- 5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse.
- 6) Bidder then logs in to the site through the secured log-in by entering their userID / password and the password of the DSC / eToken.

SEARCHING FOR TENDER DOCUMENTS

- 1) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, organization name, location, date, value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords etc. to search for a tender published on the CPP Portal.
- 2) Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective ‘My Tenders’ folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
- 3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

PREPARATION OF BIDS

- 1) Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- 2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in

which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.

- 3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF formats. Bid documents may be scanned with 100 dpi with black and white option.
- 4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use “My Space” area available to them to upload such documents. These documents may be directly submitted from the “My Space” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

SUBMISSION OF BIDS

- 1) Bidder should log into the site well in advance for bid submission so that he/she upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- 2) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 3) Bidder has to select the payment option as “offline” to pay the tender fee / EMD as applicable and enter details of the instrument.
- 4) Financial bids to be submitted in PDF format.
- 5) The server time (which is displayed on the bidders’ dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- 6) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done.
- 7) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 8) Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.

ASSISTANCE TO BIDDERS

- 1) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
- 2) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk. The contact number for the helpdesk is 1800 233 7315.

GENERAL INSTRUCTIONS TO THE BIDDERS

- 1) The tenders will be received online through portal <http://eprocure.gov.in/eprocure/app> . In the Technical Bids, the bidders are required to upload all the documents in .pdf format.
- 2) Possession of a Valid Class II/III Digital Signature Certificate (DSC) in the form of smart card/e-token in the company's name is a prerequisite for registration and participating in the bid submission activities through <http://eprocure.gov.in/eprocure/app>. Digital Signature Certificates can be obtained from the authorized certifying agencies, details of which are available in the web site <http://eprocure.gov.in/eprocure/app> under the link “Information about DSC”.
- 3) Tenderer are advised to follow the instructions provided in the ‘Instructions to the Tenderer for the e-submission of the bids online through the Central Public Procurement Portal for e Procurement at <http://eprocure.gov.in/eprocure/app> .

Contents

NOTICE INVITING TENDER.....	8
SECTION I: INVITATION FOR BIDS (IFB)	104
SECTION II: INSTRUCTIONS TO BIDDERS (ITD).....	12
SECTION III: CONDITIONS OF CONTRACT	18
SECTION IV: SCHEDULE OF REQUIREMENT	22
SECTION V: ACCEPTANCE CRITERIA - BENCHMARK TESTS	32
SECTION VI: SCOPE OF THE WORK	3327
SECTION VII: PRICE / COMMERCIAL BID.....	3630
ANNEXURE I - PROFORMA OF BANK GUARANTEE	3932
ANNEXURE II - MANUFACTURER AUTHORISATION FORMAT.....	4134
ANNEXURE III – ANNUAL TURNOVER.....	42

Computer Service Center

Indian Institute of Technology

Hauz Khas, New Delhi-110 016

Notice Inviting Tender

Tender No: IITD/CSC(SP-1735)/2018

Date- 13/07/2018

Subject: Supply & Installation of HPC Cluster at IIT Delhi

Invitation for Tender Offers

Indian Institute of Technology Delhi invites online Bids (Technical bid and Commercial bid) from reputed Principal Manufacturers of servers for **Supply & Installation of HPC Cluster at IIT Delhi** with three years on site comprehensive warranty from the date of receipt of the material as per terms & conditions specified in the tender document, which is available on CPP Portal <http://eprocure.gov.in/eprocure/app>. Earnest Money Deposit of ₹ 30,00,000/- (Thirty Lakhs only) (to be paid off-line on or before the date and time of last submission) in the form of DD in favor of Registrar, Indian Institute of Technology Delhi, payable at Delhi. The cost of tender application is ₹10,000/- (non-refundable) to be submitted through DD in favor of Registrar, Indian Institute of Technology Delhi, payable at Delhi (to be paid off-line on or before the date and time of last submission).

Bid Submission

i. **Online Bid Submission :**

The Online bids (complete in all respect) must be uploaded online in **Two** Envelops as explained below :-

Envelope – 1 (Following documents to be provided as single PDF file)			
Sl. No.	Documents	Content	File Types
1.		<p>Annexure : A (As per tender document page No.8 (Bid Submission))</p> <p>a) Upload receipt of UTR no. against tender fee of ₹10,000 (Rupees Ten Thousand Only).</p> <p>b) Upload receipt of UTR no. against Earnest Money Deposit of ₹30,00,000/- (Rupees Thirty Lacs Only) .</p> <p>c) Upload copy of cancel Cheque</p>	.PDF
2		<p>Annexure : B (As per tender document page No.8 (Bid Submission))</p> <p>d) Duly filled technical bid with proper seal and signature of the authorized person (with name, designation & contact no.)</p> <p>e) An authority letter issued by the competent authority authorizing the signatory to sign on behalf of the bidder.</p> <p>f) A copy of Certificate of Incorporation, Partnership Deed / Memorandum and Articles of Association / any other equivalent document showing date and place of incorporation, as applicable.</p>	.PDF
3		<p>Annexure : C (As per tender document page No.8 (Bid Submission))</p> <p>g) Pertaining to components other than servers, a specific authorization letter from the respective principal/s clearly indicating that the principal will provide all necessary service / support both through the bidder and directly to IIT Delhi, towards achieving performance and acceptance criteria as stipulated in this document, if and when required.</p> <p>h) Copies of Purchase Orders and successful installation reports in support of bidder fulfilling the eligibility criteria stipulated at para 5 Section – II of this Tender Document.</p> <p>i) The copy of audited financial reports/IT returns of the bidder for the financial year 2017-2018, 2016-2017 and 2015-2016 indicating the annual sales turnover required for eligibility criteria.</p>	.PDF
4		<p>Annexure : D (As per tender document page No.8 (Bid Submission))</p> <p>j) The details like make & model number of the each item quoted to be clearly specified.</p> <p>k) The printed catalogue, leaflet, Datasheets published by the principal manufacturer of the items quoted.</p> <p>l) A photocopy of the commercial bid without prices (prices blocked) and copy of commercial terms & conditions (in details) as attached in the commercial bid.</p>	.PDF

		<p>m) Other documents (if any) necessary in support of eligibility criteria.</p> <p>n) Undertaking to the effect that an irrevocable INR Performance Bank Guarantee (PBG) of 10% of the order value will be submitted at the time of placing the Supply Order. The PBG must be valid for a period of 60 days beyond the date of completion of the final warranty period.</p>	
5	Serial No.12	SECTION III: CONDITIONS OF CONTRACT (Eligibility compliance sheet)) (<i>As per format given in tender document</i>)	.PDF
6		<i>SECTION IV: SCHEDULE OF REQUIREMENT (As per format given in tender document)</i>	.PDF
7		<i>Section VI: Scope of the Work (As per format given in tender document)</i>	.PDF
8		<i>Annexure I - PROFORMA OF BANK GUARANTEE (As per format given in tender document)</i>	.PDF
9		<i>Annexure II - MANUFACTURER AUTHORISATION FORMAT (As per format given in tender document)</i>	.PDF
10		<i>Annexure III – Annual Turnover (As per format given in tender document))</i>	.PDF
Envelope – 2			
Sl. No.	TYPES	Content	
1.	Financial Bid	Section VII: PRICE / COMMERCIAL BID	.PDF

Head, Computer Services Center,
IIT Delhi,
New Delhi 110016.

Director, IIT Delhi reserves the right not to purchase all or any of the items.

SECTION I: INVITATION FOR BIDS (IFB)

1. Sealed Tenders/Quotations are invited from reputed Principal Manufacturers of servers for Supply, Installation & commissioning of High Performance Computing System at IIT Delhi as per the specification mentioned in Schedule of Requirements given in tender document.

The PRE BID meeting will be held on 20th July 2018 at 3pm at the following address. Only Bidders present in the pre-bid meeting will be eligible to place the final bid.

2. **Contact information:**

Head, Computer Services Center

IIT Delhi, New Delhi 110016

3. **Two bid System:**

4. The offer/bid should be submitted in two bid systems (i.e.) Technical bid and financial bid. The technical bid should consist of all technical details along with commercial terms and conditions. Financial bid should indicate item wise price for the items mentioned in the technical bid in the given format to be submitted in PDF format.
5. The Technical bid and the financial bid should be submitted Online in 2 Envelopes/Documents.

Envelope No. 1: "Technical Bid" shall contain:

- a) Upload receipt of UTR no. against tender fee of ₹10,000 (Rupees Ten Thousand Only).
- b) Upload receipt of UTR no. against Earnest Money Deposit of ₹30,00,000/- (Rupees Thirty Lacs Only) .
- c) Upload copy of cancel cheque.
- d) Duly filled technical bid with proper seal and signature of the authorized person (with name, designation & contact no.)
- e) An authority letter issued by the competent authority authorizing the signatory to sign on behalf of the bidder.
- f) A copy of Certificate of Incorporation, Partnership Deed / Memorandum and Articles of Association / any other equivalent document showing date and place of incorporation, as applicable.
- g) Pertaining to components other than servers, a specific authorization letter from the respective principal/s clearly indicating that the principal will provide all necessary service / support both through the bidder and directly to IIT Delhi, towards achieving performance and acceptance criteria as stipulated in this document, if and when required.
- h) Copies of Purchase Orders and successful installation reports in support of bidder fulfilling the eligibility criteria stipulated at para 5 Section – II of this Tender Document.
- i) The copy of audited financial reports/IT returns of the bidder for the financial year 2017-2018, 2016-2017 and 2015-2016 indicating the annual sales turnover required for eligibility criteria.
- j) The details like make & model number of the each item quoted to be clearly specified.
- k) The printed catalogue, leaflet, Datasheets published by the principal manufacturer of the items quoted.
- l) A photocopy of the commercial bid without prices (prices blocked) and copy of commercial terms & conditions (in details) as attached in the commercial bid.
- m) Other documents (if any) necessary in support of eligibility criteria.
- n) Undertaking to the effect that an irrevocable INR Performance Bank Guarantee (PBG) of 10% of the order value will be submitted at the time of placing the Supply Order. The PBG must be valid for a period of 60 days beyond the date of completion of the final warranty period.

Note: IIT Delhi reserves the right to accept/reject the bid if any of the above listed document/s is not submitted.

Envelope 2: "Commercial Bid" shall contain:

Commercial Bid completed in all respects with proper seal and signature of authorized person with name, designation and contact no. The bid must also include per node addition.

Pricing should be genuine and competitive. All Additional items must be quoted.

L1 will be computed on the base quantity pricing. IIT Delhi reserved the right to purchase more or less quantity based on the Additional per node pricing.

6. Date of submission of bids and opening of the Technical bids

Last date for submission of bids on Aug 3, 2018 up-to 03:00 p.m.

Technical bid will be opened on Aug 6, 2018 at 03:00 p.m. at the office of:

Deputy Registrar (Stores and Purchases)

IIT Delhi

New Delhi 110016

The bid should be submitted on-line only

The authorized representative of bidders, present at the time of opening of the bids shall be required to sign an attendance register as a proof of having attended the bid opening.

In case bidder requires any clarifications / information they may contact IIT Delhi address given in Clause 2 of Section I.

7. Opening of commercial bids

Commercial bids of the *technically qualified bidders only* will be opened, in the presence of the bidders or their authorized representatives, who choose to attend, at the **time, place and date** to be announced later.

The authorized representative of bidders, present at the time of opening of the bids shall be required to sign an attendance register as a proof of having attended the commercial bid opening.

The bidder's name, bid prices, discounts and other appropriate details will be announced at the time of the opening of the commercial bids.

END OF SECTION I

SECTION II: INSTRUCTIONS TO BIDDERS (IITD)

Delivery mode:

The entire system should be dispatched directly to IIT Delhi. In case of import, the mode of shipment from port of loading till port of discharge shall be by Air only. The bidder needs to take care of the documentary formalities and permissions required, if any, from any of the Government agencies/ departments.

The rate quoted must be CIF. Indian Institute of Technology, Delhi inclusive of packing, forwarding etc. Octroi, surcharge and transportation insurance, customs clearance charges, land taxes if any must be indicated separately. IIT Delhi (destination) will not pay separately for transit insurance, all risks in transit to be borne by the supplier. IIT Delhi stores will accept goods received in new condition in accordance with the contract. Educational discount, if any should be indicated clearly. Tenderer(s) may note that the Government of India exempts this Institute from paying excise/custom duty on selected items. Necessary documents will be furnished if required on demand by the Tenderer within 3 days(s). Demurrage will be the responsibility of the bidder.

Delivery Period:

All the items covered in the Schedule of Requirements must be dispatched directly to IIT Delhi within 6 weeks from the date of establishing of Letter of Credit. The supply, installation & commissioning of HPC system at site must be completed within 8 weeks from the date of establishment of Letter of Credit.

Packaging

Each package will be marked on three sides with proper paint/indelible ink, the following:

- i. Item Nomenclature
- ii. Order/Contract No.
- iii. Country of Origin of Goods
- iv. Supplier's Name and Address
- v. Consignee details
- vi. Packing list reference number

Delivery Intimation

Within 24 hours of shipment, the supplier shall notify the purchaser and the insurance company by cable/telex/fax/e mail the full details of the shipment including contract number, railway receipt number/AAP etc. and date, description of goods, quantity, name of the consignee, invoice etc. The supplier shall mail the following documents to the purchaser with a copy to the insurance company:

1. 4 Copies of the Supplier invoice showing contract number, goods' description, quantity
2. Unit price, total amount;
3. Acknowledgment of receipt of goods from the consignee(s) by the transporter;
4. Insurance Certificate if applicable;
5. Manufacturer's/Supplier's warranty certificate;
6. Inspection Certificate issued by the nominated inspection agency, if any
7. Supplier's factory inspection report; and
8. Certificate of Origin (if possible by the beneficiary);
9. Two copies of the packing list identifying the contents of each package.
10. The above documents should be received by the Purchaser before arrival of the Goods (except where the Goods have been delivered directly to the Consignee with all documents) and, if not received, the Supplier will be responsible for any consequent expenses.

Inspection and Test

Inspection and tests prior to shipment of Goods and at final acceptance are as follows:

Inspection and testing of the goods shall be carried out at the supplier's plant by the supplier, prior to shipment to check whether the goods are in conformity with the technical specifications attached to the purchase order. Manufacturer's test certificate with data sheet shall be issued to this effect and submitted along with the delivery documents. The purchaser shall be present at the supplier's premises during such inspection and testing if need is felt. The location where the inspection is required to be conducted should be clearly indicated. The supplier shall inform the purchaser about the site preparation, if any, needed for installation of the goods at the purchaser's site at the time of submission of order acceptance.

The acceptance test will be conducted by the Purchaser, their consultant or other such person nominated by the Purchaser at its option after the equipment is installed at purchaser's site in the presence of supplier's representatives. The acceptance will involve trouble free operation and ascertaining conformity with the ordered specifications and quality. There shall not be any additional charges for carrying out acceptance test. No malfunction, partial or complete failure of any part of the equipment is expected to occur. The Supplier shall maintain necessary log in respect of the result of the test to establish to the entire satisfaction of the Purchaser, the successful completion of the test specified.

In the event of the ordered item failing to pass the acceptance test, a period not exceeding one weeks will be given to rectify the defects and clear the acceptance test, failing which the Purchaser reserves the right to get the equipment replaced by the Supplier at no extra cost to the Purchaser.

Successful conduct and conclusion of the acceptance test for the installed goods and equipment shall also be the responsibility and at the cost of the Supplier.

Locations for the Supply, Installation, Warranty Services & AMC

The item covered by this document is required to be supplied and installed at

IIT Delhi Data Center

, IIT Delhi, New Delhi.

Warranty Services:

1. The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract. The supplier further warrants that all Goods supplied under this contract shall have no defect arising from design, materials or workmanship (except when the design and/or material is required by the Purchaser's specifications) or from any act or omission of the supplier. The warranty should be comprehensive on site, repair/replacement basis free of cost.
2. The hardware supplied must have 3 years onsite comprehensive warranty with 24x7 support along with 4 hours response time and resolution time of 1 to 2 working days (see below), covering all parts & labor starting from the date after the successful installation, demonstration of benchmark performances and acceptance by IIT Delhi. During the warranty period, vendor will have to undertake comprehensive maintenance of the entire hardware, hardware components, equipment, software support and accessories supplied by the vendor at the place of installation of the equipment.
3. The defects, if any, during the guarantee/warranty period are to be rectified free of charge by arranging free replacement wherever necessary. It should be completed within 2 working days for individual server and next working day for central components like power supply and network switches after the intimation of fault. The penalty for default is listed in the Penalty section Clause 5 of Section III.
4. All the software provided should have support for updates, upgrades and patches during the warranty period.
5. The warranty on all the associated software should cover providing of upgraded version/s, if any, released during the warranty period (i.e. 3 years) free of cost.
6. The Supplier/ Bidder should quote for additional 2 years comprehensive AMC, which will also be counted in deciding L1.
7. The supplier shall be responsible to ensure adequate supply of spare parts for a minimum period of 2 years after the expiry of the warranty period (i.e., 3 +2 years), under their annual maintenance and repairs rate contract or otherwise. Undertaking of the same shall be provided by the supplier.
8. Goods requiring warranty replacements must be replaced on free of cost basis to IIT Delhi.
9. Warranty shall not become void if IIT Delhi buys any other supplemental hardware from a third party and installs it with/in these machines. However warranty provided by the OEM/bidder/supplier shall not be applicable to such hardware items installed.
10. The bidder has to provide performance bank guarantee for the 10% of the value of bid covering the warranty period.

Annual Maintenance Contract (AMC):

1. The bidders must also quote for additional 2 years Annual Maintenance Contract (AMC) after initial 3 years warranty period. The AMC for this will be paid at the start of the respective year. The payment will be as per IIT norms on annual basis. This price will also be included in deciding L1.
2. No sub-contracting will be allowed for installation or maintaining system/equipment during or after warranty period.
3. The Bidder shall indicate on the appropriate price schedule form, the unit prices and total bid prices of the goods it proposes to supply under the contract.
4. Delay in delivery of the goods and performance of the services will attract penalty as defined under Penalty Clause 5 of Section III.

Order Placements:

The Supply Order and payments shall be released by:

Head, Computer Services Center
IIT Delhi. New Delhi 110016.

Eligibility Criteria

Bids will only be accepted from principal manufacturers of servers having full-service support offices in India.

The bidder must have executed at least 2 supply orders/ contracts/ agreements for supply and installation of High Performance Computing Cluster having peak compute power of min 200 TF each AND one supply order/ contract/ agreement for supply and installation of High Performance Computing Cluster having peak compute power of minimum 500 TF in last three years. Out of these three systems, at least one system should be accelerator based. Additionally, the bidder must also have installed one cluster in India with computation speed in excess of 100 TF. Documentary evidence (PO & Successful installation report) for the same should be furnished along with the technical bid

The bidder must have deployed at least one storage subsystem with Lustre Parallel File system. Documentary evidence (PO & Successful installation report) for the same should be furnished along with the technical bid. One of the installations should be in India.

The bidders should submit the required documents / financial instruments as stipulated in Para 3 of Section – I.

The bidder should have average annual sales turnover of at least ₹100 Cr for the last three financial years.

Bidder should have adequate experience in deployment and maintaining HPC clusters and should have executed similar kind of installations/work in leading/ premier Govt. Educational/R&D Institutions (IITs/NITs/Central Universities/Govt. R &D Organizations).

The bidder shall provide the Registration number of the firm along with the LST/CST/ WCT No. and the PAN Number, as applicable, allotted by the concerned authorities.

Pertaining to components other than servers, a specific authorization letter from the respective principal/s clearly indicating that the principal will provide all necessary service / support both through the bidder and directly to IIT Delhi, towards achieving performance and acceptance criteria as stipulated in this document, if and when required and that they would facilitate the bidder on a regular basis with technology/product updates and extend support for the warranty as well

Only one bid from each bidder would be accepted..

The bidder must not be blacklisted by IIT or any other Educational/R&D/Govt. organizations. A certificate or undertaking to this effect must be submitted.

***Note:** The bidders should provide sufficient documentary evidence to support the eligibility criteria. IIT Delhi reserves the right to reject any bid not fulfilling the eligibility criteria.*

Amendment to Bidding Documents

At any time prior to 48 hours before the deadline for submission of bids, IIT Delhi may, for any reason, whether on its own initiative or in response to the clarification request by a prospective bidder, modify the bid document.

The amendments to the tender documents, if any, will be notified by release of Corrigendum Notice in print media. The Corrigendum Notice shall also be available on our web site. The amendments/ modifications will be binding on the bidders. IIT Delhi at its discretion may extend the deadline for the submission of bids if it thinks necessary to do so or if the bid document undergoes changes during the bidding period, in order to give prospective bidders time to take into consideration the amendments while preparing their bids.

Preparation of Bids

Bidder should avoid corrections, overwriting, erasures or postscripts in the bid documents. Bidder shall not be entitled to amend/ add/ delete/ correct the clauses mentioned in the entire tender document.

Earnest Money Deposit (EMD)

The Earnest Money Deposit (EMD) shall be submitted along with the technical bid.

The EMD is required to be in the form of RTGS or NEFT for an amount of INR ₹30,00,000 (Rupees Thirty Lacs Only).

The bid submitted without EMD shall stand rejected. No interest shall be payable on EMD.

The EMD will be returned to the bidder(s) whose offer is not accepted, within 30 days from the date of opening of commercial bid(s). In case of the bidder(s) whose offer is accepted the EMD will be returned on submission of Performance Bank Guarantee (Refer Clause 4 of Section III).

The successful bidder, on award of contract / order, must send the contract/ order acceptance in writing, within 7 days of award of contract/ order, failing which the EMD will be forfeited and the order will be cancelled.

The EMD may be forfeited:

- a. If the bidder withdraws the bid during the period of bid validity specified in the tender.
- b. In case a successful bidder fails to furnish the Performance Bank Guarantee.
- c. If the bidder fails to furnish the acceptance in writing, within 7-days of award of contract/ order.

Period of validity of bids

Bids shall be valid for minimum 90 days from the date of submission. A bid valid for a shorter period shall stand rejected. IIT Delhi may ask for the bidder's consent to extend the period of validity. Such request and the response shall be made in writing only. The bidder is free not to accept such request without forfeiting the EMD. A bidder agreeing to the request for extension will not be permitted to modify his bid. **Submission of Bids**

The Bid documents shall be neatly arranged. They should not contain any terms and conditions, printed or otherwise, which are not applicable to the Bid. The conditional bid will be summarily rejected. Insertions, postscripts, additions and alterations shall not be recognized

Deadline for Submission of Bids

~~Bids must be received online by IIT Delhi before the due date and time at the specified in the tender document. In the event of the specified date for the submission of bids being declared as a holiday for IIT Delhi the bid closing deadline will stand extended to the next working day up to the same time.~~

~~IIT Delhi may extend this deadline for submission of bids by amending the bid documents and the same shall be suitably notified in the media and website of the IIT Delhi.~~

Bid Opening & Evaluation of Bids

The technical bids will be evaluated in two steps.

- a. The bids will be examined based on eligibility criteria stipulated at Para 5 of Section – II to shortlist the eligible bidders.
- b. The technical bids of only the short listed eligible bidders shall be evaluated based on technical specifications stipulated at Section – IV.

The bidders whose technical bid is found to meet both the requirements as specified above will qualify for opening of the commercial bid and will be informed about the date and time of the opening of the commercial bid.

The bids shall be evaluated by the duly constituted Technical Evaluation Committee (TEC). The TEC shall be empowered to take appropriate decisions on minor deviations, if any.

The bidder's name, bid prices, discounts and such other details considered as appropriate by IIT Delhi will be announced at the time of opening of the commercial bids.

Comparisons of Bids

Only the short-listed bids from the technical evaluation shall be considered for commercial comparison.

For the purpose of comparison of prices on equal basis, the prices quoted by bidders shall be converted to equivalent Indian Rupees. The exchange rate as on the last date of submission of bid shall be considered for the purpose of comparison.

Award of Contract

IIT Delhi shall award the contract to the eligible bidder whose technical bid has been accepted and determined as the lowest evaluated commercial bid.

If more than one bidder happens to quote the same lowest price, IIT Delhi reserves the right to decide the criteria and further process for awarding the contract, decision of IIT Delhi shall be final for awarding the contract. **Purchaser's Right to amend / cancel**

IIT Delhi reserves the right to amend the eligibility criteria, commercial terms & conditions, scope of supply, technical specifications etc.

IIT Delhi reserves the right to cancel the entire tender or any part of it.

Corrupt or Fraudulent Practices

It is expected that the bidders who wish to bid for this project have highest standards of ethics.

IIT Delhi will reject bid if it determines that the bidder recommended for award has engaged in corrupt or fraudulent practices while competing for this contract. IIT- Delhi may declare a vendor ineligible, either indefinitely or for a stated duration, to be awarded a contract if it at any time determines that the vendor has engaged in corrupt and fraudulent practices during the award / execution of contract. Interpretation of the clauses in the Tender Document / Contract Document

Interpretation of the clauses in the Tender Document / Contract Document

In case of any ambiguity/ dispute in the interpretation of any of the clauses in this Tender Document, the interpretation of the clauses by Director, IIT Delhi shall be final and binding on all parties.

The dispute resolution mechanism to be applied pursuant shall be as follows:

In case of Dispute or difference arising between the Purchaser and a domestic supplier relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Indian Arbitration & Conciliation Act, 1996, the rules there under and any statutory modifications or re-enactments thereof shall apply to the arbitration proceedings. The dispute shall be referred to the Director, Indian Institute of Technology (IIT) Delhi and if he is unable or unwilling to act, to the sole arbitration of some other person appointed by him willing to act as such Arbitrator. The award of the arbitrator so appointed shall be final, conclusive and binding on all parties to this order.

In the case of a dispute between the purchaser and a Foreign Supplier, the dispute shall be settled by arbitration in accordance with provision of sub-clause (a) above. But if this is not acceptable to the supplier then the dispute shall be settled in accordance with provisions of UNCITRAL (United Nations Commission on International Trade Law) Arbitration Rules.

The venue of the arbitration shall be the place from where the order is issued.

Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located within New Delhi.

Applicable Law: The place of jurisdiction would be New Delhi (Delhi) INDIA.

END OF SECTION II

SECTION III: CONDITIONS OF CONTRACT

1. Prices

- 1.1. Bidder can quote in Indian Rupees and USD only. The authorized partner may bid on behalf of their principals. In such cases the bidders must provide the details viz. name & address on whom the Supply Order/ Letter of Credit is to be placed/ established with bank/ account details etc. in their commercial bid. The EMD, Security Deposit and Performance Bank Guarantee should be provided by Indian representative in INR. IIT Delhi is exempted from custom duty and central excise duty in terms of Govt. of India notification
- 1.2. The prices quoted must be on “all inclusive till destination” basis. The prices quoted must be including all other taxes, packing & forwarding, freight, warehouse to warehouse all-risk basis insurance for 110% of the value, customs clearance and allied charges till IIT Delhi. IIT Delhi will arrange to provide customs duty exemption certificate and allied documents, within 3 days, subject to bidder completing the documentation requirements. If any demurrage is charged at Delhi airport, due to a delay by IIT Delhi of more than the specified 3 days in providing the documents, such demurrage will be reimbursed by IIT Delhi against submission of original documents towards payment of demurrage charges. Otherwise demurrage should be paid by the importer/supplier.
- 1.3. The bidder shall arrange to clear the consignment for USD components after following customs formalities in India and arrange to deliver the consignment to IIT Delhi. The responsibility, cost and risk of the consignment shall rest with the bidder till receipt of goods is acknowledged by the IIT Delhi. However, such receipt/ acknowledgement shall not be treated as acceptance of goods.
- 1.4. The bidding agency should be reputed firm and having all necessary certificates, viz. VAT registration certificate, PAN for Income Tax, registration Sale Tax Clearance Certificate, Authorized Dealership/Distributorship certificate, etc. The photocopies of all the certificates should be attached with the tender.
- 1.5. The bidder must provide the specification, catalogue, solution diagrams, and total power & cooling of the entire system, make/model nos. of the equipment's quoted along with datasheet of the quoted items properly. Test certificates from the manufacturer and warranty card/certificate if any must be provided with each and every item to be supplied.
- 1.6. The bidder must provide tender specific OEM Authorization for all the components in the tender. IIT Delhi will not provide educational concession Central Sales Tax Form 'D'
- 1.7. Manufacturer's/Company's name, it's trademark should be mentioned in the tender and illustrative leaflets giving technical particulars, etc. should be attached in the tender.
- 1.8. Tenderer(s) registered with the State/Central Government must quote his registration numbers, if any, and submit a Xerox copy of registration along with the tender.
- 1.9. The rate quoted can be in INR (₹) or USD and must be both in words and figures.
- 1.10. The quantity against each item mentioned in the tender may vary according to the actual requirements/availability of budget at the time of placing Purchase Order. In this case of quantity variation supplier shall undertake to supply the items with no change in the unit price quoted.
- 1.11. Quotations should be valid for at least 90 days from the date of submission of the bid.
- 1.12. The time for and date of delivery of the stores stipulated in the purchase order shall deemed to be the essence of the contract and delivery must be completed no later than the date specified therein. Failure to do so will attract penalty as mentioned in the penalty clause.
- 1.13. The bidder must fill each and every line item along with the unit cost and the quantity as mentioned in Section VII: Price/Commercial Bid. L1 will be decided based on the price and quantity of mandatory items in Section VII.
- 1.14. Each bidder shall submit only one quotation.
- 1.15. The bidder is to submit a CD/DVD containing all the technical specifications of the quoted equipment (to be submitted off-line, before the last date and time of submission)

2. Software Licenses

The software licenses, if any, shall be required in the name of IIT Delhi. The licenses shall contain paper licenses and at least one set of media (CDs).

3. Jurisdiction

The disputes, legal matters, court matters, if any shall be subject to Delhi court only.

4. Performance Bank Guarantee (PBG)

The successful bidder will be required to furnish the Performance Guarantee on the receipt of supply order, in the form of a Bank Guarantee for the 10% amount of the Supply Order value, as per the format attached to this document (Annexure – I). This Bank Guarantee shall be from a Nationalized Bank only and on a bank / branch from New Delhi. This bank guarantee should be submitted along with the proforma Invoice on the receipt of purchase order. The Bank Guarantee shall remain valid beyond 60 days after the warranty period from the date of acceptance of Order. The PBG should be submitted in INR only. In case of no warranty claims towards the item under warranty, the PBG will be returned within 60 days of completion of warranty period. In case of violation of any of the conditions of warranty (for three year), the aforesaid performance guarantee shall be invoked by IIT Delhi.

(IIT may allow the bidders a choice to submit multiple BGs of suitable denomination, for ease of invoking the BG).

5. Penalty

5.1. IIT Delhi will have the right to impose a penalty of 0.5% per week for delay under any of the following conditions.

- a. Delay in delivery of hardware beyond scheduled delivery period
- b. Delay in successful installations/commissioning of system beyond scheduled period
- c. Delay in fulfilling the Acceptance Criteria-Benchmark Tests as stipulated in Section V

5.2. The penalty shall be maximum of 10% of the P.O./contract value/price. If the delay is beyond 10 weeks IIT Delhi reserves the right to cancel the purchase order/contract without any liability to IIT Delhi.

- i. The penalty for system failure will be as follows: If there is system downtime (where more than half the nodes are non-operational) for more than four hours, a penalty of 0.2% of the total cost will apply.
- ii. Recurrence of such downtime more than 4 times in any month will incur an additional .5% of the total cost.
- iii. Any delay in node warranty servicing beyond 2 days will incur a penalty of 0.1% of the total cost per day of delay.
- iv. The maximum penalty for non-performance will be 10% of the total cost. On reaching this limit in any year, the bidder will be considered in breach of the contract. The penalty will not apply if the delay is caused by IIT Delhi

6. Completeness Responsibility

Notwithstanding the scope of work, engineering, supply and services stated in bid document, any equipment or material, engineering or technical services which might not be even specifically mentioned under the scope of supply of the vendor and which are not expressly excluded there from but which – in view of the bidder – are necessary for the performance of the equipment in accordance with the specifications are treated to be included in the bid and has to be performed by bidder. The items which are over & above the scope of supply specified in the Schedule of Requirements may be marked as “Optional Items”.

7. Payments

7.1. For orders placed in FE:- 80% of the payment will be made through irrevocable Letter of Credit (LC) with a credit period of 45 days from the date of shipment. The LC will be opened for 80% amount of PO value only after submission of BG as stipulated at para 4 above. The balance 20% payment will be made by sight draft against submission of successful installation and acceptance certificate, issued by IIT Delhi, as per clause 4 of Section III given above

7.2. The local LC opening charges inside India will be to IIT Delhi account. However the foreign bank charges will be paid by the bidder. The LC confirmation charges & LC amendment charges, if requested/ required, will be to beneficiary account.

7.3. For Orders Placed in INR:- 90% of the payment will be made after delivery with a credit period of 45 days. The balance 10% payment will be made after successful installation and testing.

7.4. TDS will be deducted as applicable.

8. Shipping Documents

The Air Way Bill and Invoices shall be marked as given below:

Bill to: Head, Computer Services Center,

Indian Institute of Technology (IIT) Delhi, New Delhi, India

Ship to: Head, Computer Services Center, Indian Institute of Technology (IIT) Delhi, New Delhi, India

9. Force Majeure

The Supplier shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, it's delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

For purposes of this Clause, "Force Majeure" means an event beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such events may include, but are not limited to, acts of the Purchaser either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.

If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such conditions and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

10. "QUALIFYING/TECHNICAL BID"

Please read the instructions given below carefully before submitting your quotation for the required items.

Important Instructions:

- 1.1. Fill up the specifications (Yes/No only) in this document format only. Any other format will lead to disqualification. Any reference to product brochure without filling appropriate entry in the "State Yes/No Compliance" column will lead to disqualification.
- 1.2. If there is any deviation from the required specification then, it should be clearly specified in the "Deviation" column and appropriate documentary proof, may be enclosed without fail.
- 1.3. It will be the sole discretion of IIT to accept or reject tenders in case of deviations, if any, from the technical specification.
- 1.4. Any misleading information, whether intentional or unintentional will lead to disqualification.

11. Eligibility compliance sheet

Particulars

Sr. No.	Requirement	Details of Certification Enclosed (YES/NO)
1	EMD INR 30,00,000/-	
2	Current Manufacturer's Authorization Letter/OEM/Dealer with guarantee of back-end support specific to this tender	
3	Copies of Last 3 financial Years duly certified, indicating details of Order Value executed.(Enclose Proof)	
4	Product Literature / Information Brochure	
5	Supply orders for installations as stipulated in Para 5 of Section II	
6	Annual audited average annual sales turnover of last 3 financial years minimum ₹100 Cr	
7	Certificate of Incorporations	
8	Registration Certificate	
9	Company Profile	
10	Demand Draft of ₹10,000 towards tender fee	
11	PAN	
12	VAT Registration Certificate & VAT Clearance Certificate	
13	Methodology of Warranty Support	
15	All necessary documents as per Eligibility criteria	

Signature of Vendor/OEM with Seal:-

Name of Vendor/OEM :-

Address: -

Date:-

END OF SECTION III

SECTION IV: SCHEDULE OF REQUIREMENT

IIT Delhi currently maintains a High-Performance Computing (HPC) system with Login/Compile nodes, Master nodes, Compute nodes, Accelerators, near 4PB Lustre file system interconnect with FDR IB network and as per the specifications given below:

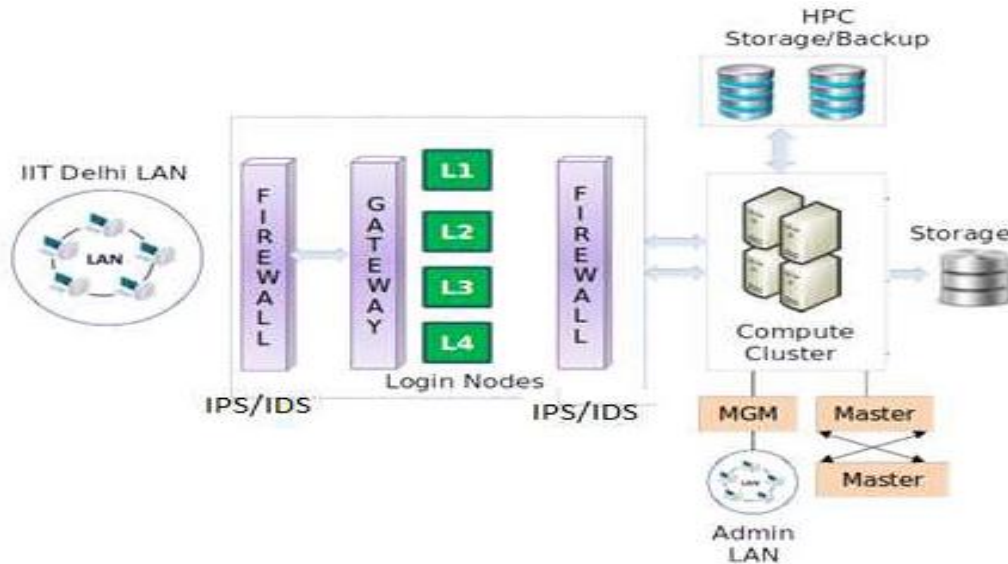


Figure: Schematic Diagram of for IIT Delhi HPC facility

Data Center Consideration

IIT Delhi proposes to enhance the system by populating approximately 5 additional RDHx cooled racks with compute nodes, each rack with a capacity of 25KW and nominally maintained at 26C inlet temperature. These RDHx Racks (**mm 800W x 2000H x 1200D 42U**) will be separately procured with dual bus-bar 3-phase power trunking runner 190 mm above the racks; for fully redundant supply (and balanced regular operation). The load bearing capacity is 1000 kg. on 19" mounting angles. (500 KG for racks with 10KW and lower). Power rating of the racks is fixed and all compute nodes and local network switches must fit within the envelop. Vendors also need to provide IP based 3 Phase intelligent PDU's for connecting the supplied equipment in the available racks on each power source in a fully redundant fashion. Additionally, cable routing trays will be run under the racks, approximately 2' below the racks to management switches and IB chassis.

PART I Intelligent PDU

Description	Compliance	Model No	Deviation (if any)
Sufficient number of intelligent PDUs to connect all the supplied Hardware			
PDU should be three phase input supply.			
PDU should have the capability to connect to the IP network through RJ45 Ethernet port			
PDU should have the capability to provide individual outlet level control over IP for switch on/off/recycle			
Each outlet should have a separate indicator to indicating its current state.			
PDU should be able to provide voltage and current readings for each power inlet and outlet			
Must integrate with existing DCIM software with IIT Delhi			

Compute Nodes

All compute nodes must be connected using Infiniband data network and ethernet management network to IITD's current login, Lustre and management server nodes. If any additional system is required for managing these compute nodes, they should be separately included. Detailed TDP rating and HPL power consumption per node should be provided.

PART II CPU Nodes

The nodes should be in dense form factor of 2 nodes per 1U, minimum 40 nodes per rack, 2-4 racks. Nodes should include redundant fans. Each rack must exceed a peak TF rating of 120 and HPL rating of 80.

Description	Compliance	Model No	Deviation (if any)
2x min. 20-core processor, each with Peak DP FLOP rating of min. 1.5TF and TDP of 150W			
96 GB DDR4, 2666 MHz (CAS 18) ECC Memory, in balanced configuration for maximum performance			
1x 600GB 10K RPM SAS Disk			
Gigabit Ethernet ports with PXE boot capability, WOL and bottleneck-free system and cluster management.			
One 4x FDR 56Gbps Infiniband HCA compatible with Infiniband switch (648 port Mellanox director FDR chassis) connected to processor with PCIe Gen3 min. x8 non-shared connectivity			
IPMI 2.0 or equivalent Support with KVM and Media over LAN features. Must include any licenses, if required for using these features.			
Fully redundant and Hot pluggable power supply. No more than 4 nodes should share any SMPS at any time.			
Fully compatible/certified with RHEL6.x, RHEL7.x and SUSE Linux Operating system.			
80 Plus Platinum or better certified power supply.			
Power cables compatible with the quoted rack PDU.			
Option A: 4x additional nodes (inclusive of power and network cables, listed clearly in commercial bid.)			
Option B: 192GB memory in lieu of 96GB per 4x nodes (list clearly in commercial bid)			

PART III GPU Nodes

The nodes should be in dense form factor 1 node per 2U, minimum 20 nodes per rack

, 1-2 racks. Each rack must provide a peak TF rating of 200 and HPL rating of 130. The specification should be the same as CPU nodes modified as follows:

Description	Compliance	Model No	Deviation (if any)
Specification of CPU Node, with 192GB memory			
1x nVIDIA V100 (32GB) connected to CPU on PCIe Gen3 x16 non-shared connectivity			
Option C: 1x additional nVIDIA 32 GB V100 (list clearly in commercial bid)			

Option D: 2x additional nodes (inclusive of power and network cables, listed clearly in commercial bid)

Part IV Software

Description	Compliance	Model No	Deviation (if any)
<p>Cluster Management tools</p> <ul style="list-style-type: none"> Commercial Cluster management, monitoring and node provisioning tools. It should include accounting, reporting, and analysis tools. License must cover all nodes including accelerators. Must be integrated with existing Open LDAP setup of IITD. Software quoted should be Licensed and Commercial software. Software proposed should be from reputed brands and should be certified by Hardware OEM's. Standard Versions of Software are to be proposed which will have full functionality and features of the product. 			
<p>Workload Manager</p> <ul style="list-style-type: none"> Open source SLURM/Moab cluster job queue manager must be supported by the bidder, including customization and integration for scheduler, Integrated Portal (5 users) framework for job submission and analytic tools (1 user). Portal should be capable of providing Result Visualization in the same GUI Integrated advanced scheduling features should include fair-share scheduling. The scheduler should be security certified Standard Versions of Software are to be proposed which will have full functionality and features of the product. Support has to be demonstrated. Option E: Fully supported PBS Pro job scheduler with minimum features listed above (separate line item in commercial bid) 			
<p>Operating System</p> <p>64 bit Linux server version with OEM Certification and OEM support</p>			
<p>Option F: RHEL 6.9 (list client licenses as separate line item)</p>			
<p>Any other software required to use and manage the system in a batched cluster environment</p>			

PART V Primary Communication Network:

Description	Compliance	Model No	Deviation (if any)
12x FDR Infiniband line cards suitable for Mellanox IB 648 port FDR Chassis. (Price bid should show per card price.)			
Sufficient numbers of Optical Infiniband cables of appropriate length and compatible with the quoted HCA cards in servers.			

PART VI Secondary Communication Network:

Description	Compliance	Model No	Deviation if any
For cluster admin network, managed L2 switches at rack level with redundant power and fan and connected with 10G uplink to two central 10G switches redundantly (HP 5700)			
Required numbers of CAT6 molded Cables of appropriate length to suite the solution			
Power cables compatible with the quoted rack PDU			
Rack mounting kit			

PART VII In-rack cooling (Entire part is optional: Option G)

Description	Compliance	Model No	Deviation if any
RDHx or similar solution utilizing the 19C chilled water that will be available in DC. The outlet air temperature may be allowed up to 28C.			

All parts must be separately itemized in the commercial bid. IIT Delhi reserves the right to evaluate bids for each part separately and accept or reject them on a per part basis. Options must be included in the bid but L1 will be based on non-options only.

Section V: Acceptance Criteria - Benchmark tests Benchmark details are as follows. Results need to be submitted along with the bid and need to be reproduced after system installation. This is will be used as one of the acceptance criteria for successful HPC installation.

1. High-performance LINPACK (HPL) benchmarking

The bidder must meet HPL performance and efficiency on the proposed HPC system as per the below table with turbo-mode and hyper-threading off, within 2%. Modifications to the input file in order to fit system functionalities should be reported while submitting the benchmark results.

Condition	HPL Efficiency (Minimum % of Rpeak)
High-performance Linpack benchmark across all compute nodes (Not using any accelerator) including GPU nodes	65 % Rpeak
High-performance Linpack benchmark across GPU nodes	63% Rpeak

2. **Primary network communication bandwidth**

Latency less than 1.5 microseconds and throughput of 48 Gigabits/second sustained with half compute nodes on each line card sending data to the other half in parallel.

Section VI: Scope of the Work

1. Installation, testing, commissioning and demonstrating the benchmarks (High Performance LINPAC (HPL) and other applications) result (as per given in Section V) on the proposed HPC solution is to be done at IIT Delhi.
2. Reproduce throughput of LFS clients (storage subsystem provides over 50GiB/s read and write throughput).
3. Reproduce node FDR network throughput (48 Gb/s). Nodes should be integrate with Open LDAP and batch system setup of IIT Delhi.
4. Bidder should provide the total BTU and Power rating of the quoted hardware.
5. Bidder should provide details of heat dissipation and cooling requirements.
6. Provide the solution layout; Configuration should be done in such a way to distribute power/cooling load between the racks. Accordingly all the cables should be of appropriate lengths
7. Documentation and Manuals of all systems to be supplied.
8. Entire installation, commissioning, benchmarking and cleanup should be completed within 4 weeks.

Mandatory over all conditions (Must be filled by the bidder)

Description	Compliance	Deviation (if any)
Bid must include a detailed schematic diagram of how the switches, PDUs and other units will fit into the racks and connected.		
Any additional site-preparation requirement must be listed with compliance chart		
Rack-mount kits to be included		
All specs are to be with specified clock-rates without any overclocking		
Cooling solution should be self-sufficient, No water or additional cooling medium can be provided to the servers.		
Provision for centralized call and email logging facility. Supplied H/W and S/W to provide 24x7 operations with 4 hrs response time and 1 or 2 working days resolution time from the point of logging the problem. Intimation of any change to email/phone number must be received in writing before the old number/email become non-functional.		
Necessary and sufficient number of spare items of h/w and s/w to meet the above requirement should be maintained at IIT Delhi site. Provide list and quantity of such spare items.		
The bidder should be the single point of contact for supporting all the supplied components		
Supply, installation and integration of all the supplied h/w and s/w to be done by the bidder		
All supplied h/w will have to be installed by the bidder in 42U RDHX racks already procured by IIT Delhi		
The cables across racks will be routed to the top of racks and through runners at the top.		
Vendor to remove boxes within one week of installation.		
Installation to include cleanly routed, grouped, tied and labelled cables. All nodes to be labelled		
All software must be 64-bit unless specified otherwise in that software section or if such a software is not available in 64-bit mode. Backward compatibility with 32-bit should be maintained wherever applicable		
Wherever applicable all software must be multi-core aware (scalable to two		

socket eight core CPU) and also compatible to GPU / Accelerators and Co-processors		
Wherever applicable all software must be interoperable with each other and work on quoted OS on quoted hardware		
All software must be provided on media along with license documents		
Licensing policy of each software must be elaborated		
All software should be provided along with soft copies of documentation		
Quantity of licenses for all software is for quoted number of fully populated nodes, unless specified otherwise in software section		
5 years, on-site, comprehensive warranty for all quoted h/w Upgrades for all s/w components including 3rd party s/w quoted, for 5 years		
Consultation support for performance tuning and maintenance for 1 year		
Training for following items to be imparted to at least 10 IIT Delhi members at a mutually acceptable schedule: <ol style="list-style-type: none"> 1. Installation, configuration, operations and management of quoted compute/GPU node 2. Installation, configuration, operations and management of quoted Network Monitoring and Management Tools 		
The Bidder should guarantee that they will provide extensive documentation of processor architecture, datasheets of various h/w components, details of performance optimization of memory/IO subsystem, etc.		
Bidder should guarantee that the nodes supplied are compatible and work optimally with quoted Infiniband HCAs and quoted Infiniband Switch.		
The node should support and work with quoted Gigabit, Infiniband Network Interface Cards, quoted GPU accelerators concurrently.		
Bidder should provide cooling requirements of quoted Compute node like CFM, Max. BTU generation, in flow air temperature etc.		
Bidder should provide minimum and maximum power requirement of quoted compute node (RPS not considered)		
Bidder should provide the full documentation like technical documents as well as user manual for the quoted GPU / Accelerator / Co-processor.		
Bidder should provide the Software, Firmware / O.S available on the quoted GPU / Accelerator / Co-processor product.		
Bidder should provide all the licenses (perpetual) for all the quoted Hardware and Software wherever applicable.		

Section VII: PRICE / COMMERCIAL BID

NO:

Item No.: Supply & Installation of HPC Cluster at IIT Delhi

Note: Fill each line Item mentioned along with the unit cost and quantity in the below table.

Mandatory Items: Quantity as per Section IV

Sr. No	Name and Specification of the Item	Unit Cost (Please mention the Currency here _____)	Qty	Total Cost1
1	CPU Only nodes			
2	GPU Enabled nodes			
3	Software (provide list)			
a.	Cluster management tool			
b.	Operating System			
d.	Workload Manager			
4	Primary Communication Network			
a.	IB Line cards			
b.	Optical IB cables			
5	Secondary Communication Network			
6	Intelligent PDU			
7	Part-wise Installation and commissioning charges			
8	Any additional Items required to complete the solution (provide detailed itemized list)			
9	AMC for all each components for 4 th year (add rows)			
10	AMC for each above components for 5 th year (add rows)			

Additional Items: All Additional Items (options A to G) must be quoted. The prices for AMC of required items for the 4th and 5th years will be included in computation of L1. Optional items and 6th and 7th years prices will not.

Sr. No	Name and Specification of the Item	Unit Cost (Please mention the Currency here _____)	Qty	Total Cost
1	4x Additional standard CPU nodes			
2	2x Additional standard GPU nodes			
3	upgrade to 192 GB memory in CPU nodes (per node)			
4	V100 (32 GB)			
5	PBS Pro			
6	RHEL			

7	In-rack cooling			
8	AMC for 4 th year for each option (add rows)			
9	AMC for 5 th year for each option (add rows)			
	AMC for 6 th year for each item (add necessary rows)			
	AMC for 7 th year for each item (add necessary rows)			

DUTIES & TAXES (if applicable):

- | | | | | | |
|----------------------------|---|-------|------------|---|-------|
| 1. Excise | : | _____ | 2. Freight | : | _____ |
| 3. V.A.T. | : | _____ | 4. Octroi | : | _____ |
| 5. Others, (if any): _____ | | | | | |

We agree to supply the above items for total (_____ Amount in figures)
 (_____ Amount in words) within the period specified
 in the Invitation for Quotations.

Signature of Supplier
 (Authorized Signatory)

Stamp

Annexure I - PROFORMA OF BANK GUARANTEE

(On non-judicial paper of appropriate value)

To,

Indian Institute of Technology (IIT),

Delhi-110016 India

BANKS GUARANTEE NO:

DATE:

Dear Sir(S)

This has reference to the Purchase Order No. _____ Dated _____ been placed by Indian Institute of Technology (IIT), Delhi – , India on M/s _____ (Name & Address of vendor) for supply, installation, commissioning and warranty of _____ (description of items) at client's site.

The conditions of this order provide that the vendor shall,

1. Arrange to deliver the items listed in the said order to the consignee, as per details given in said order, and
2. Arrange to install and commission the items listed in said order at client's site, to the entire satisfaction of IIT Delhi and
3. Arrange for the comprehensive warranty service support towards the items supplied by vendor on site in IIT Delhi as per the warranty clause in said purchase order.

M/s (Name of Vendor) has accepted the said purchase order with the terms and conditions stipulated therein and have agreed to issue the performance bank guarantee on their part, towards promises and assurance of their contractual obligations vide the Supply Order No. _____ M/s. _____ (name of vendor) holds an account with us and has approached us and at their request and in consideration of the promises, we hereby furnish such guarantees as mentioned hereinafter. IIT Delhi shall be at liberty without reference to the Bank and without affecting the full liability of the Bank hereunder to take any other undertaking of security in respect of the suppliers obligations and / or liabilities under or in connection with the said contract or to vary the terms vis-a – vis the supplier or the said contract or to grant time and or indulgence to the supplier or to reduce or to increase or otherwise vary the prices or the total contract value or to forebear from enforcement of all or any of the obligations of the supplier under the said contract and/or the remedies of IIT Delhi under any security (ies) now, or hereafter held by IIT Delhi and no such dealing(s) with the supplier or release or forbearance whatsoever shall have the effect of releasing the bank from its full liability of IIT Delhi hereunder or of prejudicing right of IIT Delhi against the bank.

This undertaking guarantee shall be a continuing undertaking guarantee and shall remain valid and irrevocable for all claims of IIT Delhi and liabilities of the supplier arising up to and until _____ (date).

This undertaking guarantee shall be in addition to any other undertaking or guarantee or security whatsoever the that IIT Delhi may now or at any time have in relation to its claims or the supplier's obligations/liabilities under and / or in connection with the said contract and IIT Delhi shall have the full authority to take recourse to or enforce this undertaking guarantee in preference to the other undertaking or security (ies) at its sole discretion and no failure on the part of IIT Delhi in enforcing or requiring enforcement of any other undertaking or security shall have the effect of releasing the bank from its full liability hereunder.

We _____ (Name of Bank) hereby agree and irrevocably undertake and promise that if in your (IIT Delhi) opinion any default is made by M/s _____ (Name of Vendor) in performing any of the terms and /or conditions of the agreement or if in your opinion they commit any breach of the contract or there is any demand by you against M/s _____ (Name of Vendor), then on notice to us by you, we shall on demand and without demur and without reference to M/s _____ (Name of Vendor), pay you, in any manner in which you may direct, the amount of Rs. _____/- (Rupees _____ Only) or such portion thereof as may be demanded by you not exceeding the said sum and as you may from time to time require. Our liability to pay is not dependent or conditional on your proceeding against M/s _____ (Name of Vendor) and we shall be liable & obligated to pay the aforesaid amount as and when demanded by you merely on an intimation being given by you and even before any legal proceedings, if any, are taken against M/s _____ (Name of Vendor).

The Bank hereby waives all rights at any time inconsistent with the terms of this undertaking guarantee and the obligations of the bank in terms hereof shall not be anywise affected or suspended by reason of any dispute or disputes having been raised by the supplier (whether or not pending before any arbitrator, Tribunal or Court) or any denial of liability by the supplier or any order or any order or communication whatsoever by the supplier stopping or preventing or purporting to stop or prevent payment by the Bank to IIT Delhi hereunder.

The amount stated in any notice of demand addressed by IIT Delhi to the Bank as claimed by IIT Delhi from the supplier or as suffered or incurred by IIT Delhi on the account of any losses or damages or costs, charges and/or expenses shall as

between the Bank and IIT Delhi be conclusive of the amount so claimed or liable to be paid to IIT Delhi or suffered or incurred by IIT Delhi, as the case may be and payable by the Bank to IIT Delhi in terms hereof.

You (IIT Delhi's) shall full liberty without reference to us and without affecting this guarantee, postpone for any time or from time to time the exercise of any of the powers and rights conferred on you under the contract with the said M/s _____ (Name of Vendor) and to enforce or to forbear from endorsing any power or rights or by reason of time being given to the said M/s _____ (name of Vendor) which under law relating to the sureties would but for the provisions have the effect of releasing us.

You will have full liberty without reference to us and without affecting this guarantee, postpone for any time or from time to time the exercise of any of the powers and rights conferred on you under the contract with the said M/s _____ (Name of Vendor) and to enforce or to forbear from endorsing any power or rights or by reason of time being given to the said M/s _____ (Name of Vendor) which under law relating to the sureties would but for the provisions have the effect of releasing us.

Your right to recover the said sum of Rs. _____/- (Rupees _____ only) from us in manner aforesaid will not be affected/ or suspended by reason of the fact that any dispute or disputes have been raised they said M/s _____ (Name of Vendor) and/ or that any dispute or disputes are pending before any officer, tribunal or court or Arbitrator.

The guarantee herein contained shall not be determined or affected by the liquidation or winding up, dissolution or change of constitution or insolvency of the said M/s _____ (Name of Vendor) but shall in all respects and for all purposes be binding and operative until payment of all dues to IIT Delhi in respect of such liability or liabilities.

Our liability under this guarantee is restricted to Rs. _____/- (Rupees _____ Only). Our guarantee shall remain in force until unless a suit action to enforce a claim under guarantee is filed against us within six months from (which is date of expiry of guarantee) all your rights under the said guarantee shall be forfeited and we shall be relieved and discharged from all liabilities there under.

We have power to issue this guarantee in your favour under Memorandum and Articles of Association of our Bank and the undersigned has full power to do under the power of Attorney dated.

Notwithstanding anything contained herein:

- A. Our liability under this guarantee shall not exceed Rs _____ (in words)
- B. This bank guarantee shall be valid up to _____ & unless a suit for action to enforce a claim under guarantee is filed against us within six months from the date of expiry of guarantee. All your rights under the said guarantee shall be forfeited and we shall be relieved and discharged from all liabilities there after i.e. after six months from the date of expiry of this Bank guarantee
- C. We are liable to pay the guaranteed amount or any parts thereof under this bank guarantee only and only if you serve upon us a written claim or demand or before _____
- D. the Bank guarantee will expire on _____

Granted by the Bank

Yours faithfully,

For (Name of Bank)

SEAL OF THE BANK

Authorised Signatory

Annexure II - MANUFACTURER AUTHORISATION FORMAT

(To be submitted in Original on Letterhead)

Date:

**Indian Institute of Technology (IIT),
Delhi – 110016 India**

Subject: Manufacturer authorisation against tender no. _____ for Supply, Installation & Commissioning of HPC System at IIT Delhi.

Dear Sir,

We, M/s (*Name of the manufacturer*) having registered office at (*address of the manufacturer*) hereby virtue of being manufacturer for (*Name of the product/s*), hereby authorise M/s (*Name of the bidder*) having their office at (*Address of bidder*) to submit quote, negotiate, supply, install and provide after sales support for our range of products quoted by them to meet the above mentioned tender requirements at IIT Delhi.

M/s (*Name of the manufacturer*) within the scope of requirement as per the tender mentioned above through M/s (*Name of the bidder*) shall provide support & product warranty services for a minimum period of three years form the date of supply. We will provide full back-end support.

The undersigned is authorised to issue such authorisation on behalf of M/s (*Name of the manufacturer*).

For M/s (*Name of the manufacturer*)

Signature & company seal

Name :

Designation :

E-mail :

Mobile No :

Annexure III – Annual Turnover

Sl. No.	Financial / Accounting Year	Profit (Rs.)	Loss (Rs.)	Annual Turnover (in Indian Rupees)
1.	2017-2018			
2.	2016 -2017			
3.	2015 -2016			

AUTHORIZED SIGNATORY WITH SEAL

N.B.

The right to suspend the NIQ/IIT process or part of the process, to accept or reject any or all NIQ/IITs at any stage of the process and/or to modify the process or any part thereof at any time without assigning any reasons thereto is reserved by IIT Delhi without any obligation or liability whatsoever.