



भारतीय प्रौद्योगिकी संस्थान गुवाहाटी,  
गुवाहाटी-781 039

गुवाहाटी-781039, भारत

Guwahati-781039, India

Phone : +91-361-2583080

+91-361-2583091

Email : ar\_rnd@iitg.ac.in



OFFICE OF THE RESEARCH  
& DEVELOPMENT SECTION

Manash Jyoti Pathak  
Assistant Registrar

Indian Institute of Technology  
Guwahati,  
Guwahati-781 039, Assam, India.

• To,

All interested Vendors

• Date : 11.10.2023

• Ref<sup>n</sup>: IITG/RND/T111/23-24

**SUBJECT: Notice inviting quotation for Supply and Installation of Server with dual GPU, single GPU, NON –GPU, SAN Storage, KVM Switch, Console, Rack, 1G & 10G Switch**

Dear Sir/ Madam,

The Indian Institute of Technology Guwahati, invites quotations for **supply and installation of Server with dual GPU, single GPU, NON –GPU, SAN Storage, KVM Switch, Console, Rack, 1G & 10G Switch** as per details mentioned in the **Annexure-I**, attached herewith. The quotation is to be submitted **online** as per 'Instruction to Bidders', 'Terms & Conditions' and Annexure-I, II, III, IV, and V on or before **01.11.2023 at 12:00 HRS**.

Kindly read the NIQ document carefully before participating. It shall be deemed that submission of bid by the bidder has been done after their careful study and examination of the NIQ terms with full understanding to its implications. Any lack of information shall not in any way relieve the bidder of its responsibility to fulfill its obligations under the Bid.

The Director IITG will reject a proposal for award if it is determined that the bidder recommended for award has engaged in corrupt or fraudulent practices in competing for, or in executing, the Purchase Order. Fraudulent Practice means a misrepresentation of facts in order to influence a procurement process and includes collusive practice among bidders (prior to or after Bid submission) designed to establish Bid prices at artificial non-competitive levels and to deprive IITG of the benefits of free and fair competition. Corrupt Practice means offering, giving, receiving or soliciting of anything of value, pressurizing to influence the action of a public official in the process of this purchase execution.

### **INSTRUCTION TO BIDDERS**

**01. Mode of bid:** Tender will have to be submitted in **Double bid**.

**02. Important Date, Time and Venue:**

Sl. No.	Particulars	Date & Time
01	Date of uploading of NIQ & other documents	11.10.2023 at 16.00 hrs
02	Documents download/sell start date	11.10.2023 at 18:00 hrs
03	Documents download/sell end date	01.11.2023 at 12:00 hrs
04	Pre-Bid Meeting	N/A
05	Bid submission start date	11.10.2023 at 18:00 hrs
06	Bid submission closing	01.11.2023 at 12:00 hrs
07	Technical Bid Opening date	02.11.2023 at 14:00 hrs
08	Venue of Technical bid opening	Dept. of EEE, IIT Guwahati
09	Financial Bid Opening date	To be informed later on

**03. Submission of bids:** Bids are to be submitted through online to the website <https://eprocure.gov.in/eprocure/app> in **Two Covers**, one in Fee/Technical Cover & the other is Financial Cover before the prescribed date and time using the Digital Signature Certificate (DSC). The documents duly digitally signed are to be uploaded.

**03.1. Fee / Technical Bid:** The technical Cover should contain scanned PDF copies (Single pdf file for multiple pages and documents) of the following in two folders. The seal and signature of the authorized official of firms must appear on all the papers uploaded.

**03.1.A. Fee/Technical Documents:**

- Scanned copy of EMD. If any bidder is exempted from payment of EMD, Relevant Document(s) needs to be uploaded as mentioned in sl. no. 08 of the Terms & Condition.
- Compliance certificate [**Annexure –II**]

- iii. Manufacturer's Certificate in case of manufacturer or Manufacturer Certificate along with Authorized Dealership Certificate on the offered products in case of Agent or Dealer.
- iv. Details of the technical features of the offered item in the format at **Annexure-I**
- v. Standard Technical leaflet/literature of the item offered
- vi. HSN/SAC Number, ISO/ISI Certificate and Proof of Certification as per specification
- vii. Warranty Details.

**03.1.B. Other Important Documents (OID):**

- i. Bidder's detail and its Service Centre detail as per format at **Annexure-III**
- ii. Character certificate (Undertaking that currently the vendor is not blacklisted by any govt. organization/institution)
- iii. GST Registration Certificate and GST Clearance certificate.
- iv. PAN Detail and TIN number
- v. Registration Certificate
- vi. Banker's Detail
- vii. List of reputed organizations/institutions, particularly to IIT/Institutes and other Government Organization where similar orders have been executed, if any (copy (s) of the Purchase Orders and Installation certificates will have to be uploaded).

**03.2. Financial Cover:** The financial Cover should contain Bill of Quantities (BOQ) **in excel format**. The bidder is to quote the rate in the space marked for quoting rate in the BOQ. Only downloaded copy with same file name of BOQ document must be uploaded by the bidder after filling up.

**04. Evaluation of Process:**

- 04.1. Opening of Technical Cover: Technical Documents will be opened by the Purchase Committee members using Digital Signature Certificate (DSC).
- 04.2. Cover for Fee/Technical Documents (Ref. Sl. No. 03.1.A) and cover for Other Important Documents (Ref. Sl. No. 03.1.B.) will be opened. If there is any deficiency/discrepancy in the Documents, the bidder will summarily be rejected.
- 04.3. Decrypted (transformed into readable formats) documents of the covers will be downloaded and handed over to the Purchase Committee.
- 04.4. Summary list of technically qualified bidders will be uploaded online.
- 04.5. During evaluation the Committee may summon the bidders and seek clarification/information or additional documents or original hard copy of any of the documents already submitted & if these are not produced within the stipulated time frame, their proposals will be liable for rejection.
- 04.6. The Financial offer of the prospective bidder will be considered only if the Technical Bid of the bidder is found qualified by the Purchase Committee.

**05. Award:** The Final Award will be given to the vendor, selected by the Purchase Committee on the lowest quote basis.

**06. Communication:** In all communication to and from IIT Guwahati, the following email IDs are to be put in loop mandatorily.

- (a) [ar\\_rnd@iitg.ac.in](mailto:ar_rnd@iitg.ac.in)
- (b) [trivedi@iitg.ac.in](mailto:trivedi@iitg.ac.in)
- (c) [priyadevi@iitg.ac.in](mailto:priyadevi@iitg.ac.in)

## TERMS & CONDITIONS

**01. Rates:** Rates quoted should be on **F.O.R. IIT Guwahati** basis for indigenous items and on **DOOR DELIVERY PAID** basis for imported items, with break-ups as per BOQ. Failing to provide as per BOQ, quotation may not be accepted.

Currency Conversion against Item in Column K of BOQ Excel file there is two conversion type: 1. If you choose "Full Conversion" then Column BA (AMOUNT) and Column BB (TAXES) BOTH values will be converted based on selected Currency in (Column L). 2. If you choose "Partial Conversion" then Column BA (AMOUNT) only will be converted based on selected currency (Column L) and Column BB (TAXES) value (INR) will be added to the converted values. If any bidder quotes all the Amount in INR, the bidder must select "Full Conversion" type in currency conversion in column K.

**02. Validity of Quotation:** Quoted rates must be valid for **120 days** from the last date of submission of quotation.

**03. Warranty:** Please refer to Annexure I (Technical Specifications).

**04. Literature a must:** All the quotations must be supported by technical leaflet/literature and the specifications mentioned in the quotation must be reflected/ supported by such technical leaflet/ literature. The model and specifications quoted should **invariably be highlighted** in the leaflet/literature for easy reference.

**05. After Sales Service:** The bidders should clearly state the detail address, contact number and email ids of after sales service centre in India in Bidder's Details under Statutory Cover as at **Annexure-III** without which their offers shall be liable for rejection.

**06. Dealership Certificate:** Dealers or Agents quoting on behalf of Manufacturer must upload valid dealership certificate.

**07. Quality Certificates:** Valid certificate to prove that the products are genuine and of International standard, as mentioned below, must be uploaded: (a) Manufacturer's certificate; (b) ISO/ISI certificate.

**08. Earnest Money:** An Earnest Money Deposit (EMD) for **₹5,00,000.00 (Rupees Five Lakh only)** in the form of Bank Guarantee as Annexure-IV OR an Account Payee Demand Draft OR Fixed Deposit Receipt from a Commercial bank in favor of "Registrar IIT Guwahati", payable at IIT Guwahati, will have to be submitted to The Assistant Registrar, Research & Development Section, IIT Guwahati, Guwahati 781039. For items treated as part of the same unit the total values of all items taken together will be treated as the value for EMD amount. Offers received without Earnest Money or valid Certificate shall be summarily rejected.

EMD of unsuccessful bidder will be returned within one month of placement of Purchase Order. In case of the successful bidder the EMD will be returned on receipt of the PBG.

If exemption is sought from production of EMD, the same should clearly be mentioned indicating the clause under which exemption is sought. EMD is exempted under the following conditions: -

(i) Firms which are specifically registered for the required items with DGS&D or with NSIC Copy of valid registration must be uploaded in place of EMD document.

(ii) Vendors have successfully executed two Purchase Orders in the last three Financial Years in IIT Guwahati, copies of the PO must be uploaded in place of EMD document.

**09. Performance Bank Guarantee:** The successful bidder, to whom the PO is placed, shall furnish an unconditional Performance Bank Guarantee from a scheduled Bank of India, as per the below mentioned slab, within 21 days of placement of order. The format for PBG, unless otherwise approved by the competent authority, shall be as per the format enclosed at **ANNEXURE-V**. In case of foreign purchase, the local Agent shall submit the PBG, where the PBG is to be necessarily given by a foreign bank, it shall be endorsed by its counterpart in India. Validity of the PBG, which shall be effective from the date mentioned therein, shall be **warranty period + 2 months**.

In exceptional case or on the request of the Indenting Officer competent authority may allow starting of PBG Period from the date of installation, in which case submission of PBG valid for **warranty period + 2 months** may be made within 21 days from the date of installation.

(i) **By submitting the PBG, the vendor is understood to have guaranteed that,**

(a) The Purchase Order (PO) shall be executed as per terms and conditions mentioned therein.

(b) The equipment shall function satisfactorily for a period up to 60 days after the warranty period.

(c) The equipment and components are free from poor workmanship, bad quality, and faulty designs.

- (d) The vendor shall at his/their own cost rectify/replace the defects, if any, during the guarantee period.  
(e) The guarantee is to the extent of the below mentioned slab.

**(ii) Condition for invoking PBG:** In case of failure to comply with the guarantees above, IITG may terminate the contract / purchase order in whole or in part and forfeit the PBG. In addition, IITG may, at its discretion, procure upon such terms and in such manner as it deems appropriate, goods similar to the undelivered items/products and the defaulting supplier/vendor shall be liable to compensate IITG for any extra expenditure involved.

**Slab 1: PO value (1.01 lakh- 5.00 lakhs) ----- PBG Rate: 3%**  
**Slab 2: PO value (5.01 lakh- 7.50 lakhs) ----- PBG Rate: 5%**  
**Slab 3: PO value (7.51 lakh- 10.00 lakhs) -----PBG Rate: 7.5%**  
**Slab 4: PO value (10.01 lakh-14.99 lakhs) -----PBG Rate: 8.5%**  
**Slab 5: PO value (15 lakhs and more) -----PBG Rate: 10%**

#### 10. Delivery:

- a) Time Limit:** Maximum within 45 days from the date of issue of purchase order in case of indigenous items and 90 days for imported items.  
**b) Safe Delivery:** All aspects of safe delivery shall be the exclusive responsibility of the vendor. At the destination site, the package will be opened only in the presence of IIT user/representative and vendor's representative. The intact condition of the package and the seal/indicators for not being tampered with shall form the basis for certifying the receipt in good condition.  
**c) Insurance:** The supplier is to establish 'All Risk Transit Insurance' coverage till door delivery at IIT **Guwahati**.  
**d) Part Delivery:** Part delivery is not allowed.  
**e) Penalty Delay Delivery:** The date of delivery should be strictly adhered to otherwise the Director, IITG reserves the right not to accept delivery in part or full.

**11. Genuine Pricing:** Vendor is to ensure that quoted price is not more than the price offered to any other customer in India to whom this particular item has been sold, particularly to IIT/Institutes and other Government Organization. Copy of the latest price list for the quoted item, applicable in India, must be uploaded with the offer.

**12. Conditional tenders not acceptable:** All the terms and conditions mentioned herein must be strictly adhered to by all the vendors. Conditional tenders shall not be accepted on any ground and shall be rejected straightway. Printed conditions mentioned in the tender bids submitted by vendors will not be binding on IITG.

#### 13. GST Inward Permit & Entry Tax:

- (a) GST Inward Permit: GST Inward Permits (Way bills) shall be issued as applicable for delivery of materials against receipt of Final Invoice/ Bill.  
(b) Entry Tax: Assam Govt. Entry Tax [to be paid by IIT Guwahati, not by the vendor], wherever applicable, will be added while evaluating cost status of the concerned equipment to be supplied by vendors from outside the State of Assam.

#### 14. GST:

- (a) Up-to-date Sales Tax clearance certificate, GST Registration Certificate indicating also the GSTIN number of the firm must be clearly mentioned in the quotation, Certificates must be uploaded.  
(b) GST Deduction at source as per Order/notification of the Govt. of India will be applicable.  
(c) GST No of IIT Guwahati is 18AAAJI0130P1Z8  
(d) HSN/SAC No of the items must be clearly mentioned in the quotation along with GST No.

**15. Late and delayed tender:** Late and delayed tender will not be considered.

#### 16. Payment to Local supplier:

- (i) 100% Payment within 45 days from the date of successful delivery, installation and commissioning/ acceptance of goods at IIT Guwahati, generally through RTGS / NEFT, **OR**  
(ii) 90% Payment against delivery and 10% payment after successful installation and/ or commissioning of the ordered goods at site.

**Please note as per Institute's norm advance payment is not allowed for indigenous purchase.**

**17. Penalty for delayed delivery:** The date of delivery should be strictly adhered to. In the event of delayed delivery, installation & commissioning, the vendor shall be liable for a penalty deduction at a percentage of the value of the undelivered equipment subject to a maximum of 10% (ten percent) as detailed below:

- @ 1% up to one week;
- @ 2.5% up to two weeks;
- @ 5% up to three weeks;
- @ 10% for four weeks and above

For the purpose of this clause, part of the week is considered as a full week. In case of delayed delivery, the Director, IIT Guwahati reserves the right not to accept the subject consignment.

**18. Enquiry during the course of evaluation not allowed:** No enquiry shall be made by the bidder(s) during the course of evaluation of the tender till final decision is conveyed to the successful bidder(s). However, the Purchase Committee or its authorized representative (IIT Guwahati) can make any enquiry/seek clarification from the bidders. In such a situation, the agency shall extend full co-operation. The bidders may also be asked to arrange demonstration of the offered items, in a short period notice, as such the bidders have to be ready for the same.

**19. Acceptance of quotations:** The acceptance of the quotation will rest solely with the Director, IITG, who in the interest of the Institute is not bound to accept the lowest quotation and reserves the right to himself to reject or partially accept any or all the quotations received without assigning any reasons.

**20. Force Majeure:** If the performance of the obligation of either party is rendered commercially impossible by any of the events hereafter mentioned that party shall be under no obligation to perform the agreement under order after giving notice of 15 days from the date of such an event in writing to the other party, and the events referred to are as follows:

- I) Any law, statute or ordinance, order action or regulations of the Government of India,
- II) Any kind of natural disaster, and
- III) Strikes acts of the Public enemy, war, insurrections, riots, lockouts, sabotage.

**21. Termination for default:** Default is said to have occurred

(a) If the equipment or any of its component is found having poor workmanship, faulty designs, poor performance and bad quality of materials used.

(b) If the supplier fails to deliver any or all of the services within the time period(s) specified in the purchase order or any extension thereof granted by IIT.

(c) If the supplier fails to perform any other obligation(s) under the contract.

(d) Under the above circumstances IIT may terminate the contract / purchase order in whole or in part and forfeit the EMD/PBG as applicable. In addition to above, IIT may at its discretion also take the following actions: IIT may procure, upon such terms and in such manner, as it deems appropriate, goods similar to the undelivered items/products and the defaulting supplier shall be liable to compensate IIT for any extra expenditure involved towards goods and services obtained. Besides, the Director, IITG, reserves the right to impose any other form of penalty as deemed fit including blacklisting of the vendor.

**22. Applicable Law:**

(a) The contract shall be governed by the laws and procedures established by Govt. of India and subject to exclusive jurisdiction of Competent Court and Forum in Guwahati or India only.

(b) Any dispute arising out of this purchase shall be referred to the Director IIT Guwahati, and if either of the parties hereto is dissatisfied with the decision, the dispute shall be referred to the decision of an Arbitrator, who should be acceptable to both the parties, to be appointed by the Director of the Institute. The decision of such Arbitrator shall be final and binding on both the parties.

**23. Additional terms for imported goods:** Following terms besides the aforementioned terms (1 to 22 except 14 and 16) will be applicable in case of foreign supply:

**a) Rates:** Rates quoted should be on Delivered Duty Paid (DDP)/ Delivery at Place (DAP) basis, with break-ups as per details given in the BOQ. Failing to provide as per BOQ, quotation may not be accepted.

**b) Exchange rate:** Rate of foreign exchange shall be the rate prevailing on the date of quotation opening.

**c) Delivery:** Maximum within 90 days from the date of issue/receipt of purchase order.

(i) Door Delivery at IIT Guwahati.

(ii) While transshipment will be allowed, part shipment will not be allowed.

**d) Payment:**

(i) Above INR 5 Lacs by Letter of Credit (LOC): By an irrevocable letter of Credit at DDP/DAP IITG value negotiable through any overseas branch of Axis Bank with unrestricted provision. 90% of payment will be released on receipt of the shipping document and balance 10% after receipt of consignment. LOC will be established on receipt of Order acknowledgment and Performance Bank Guarantee (PBG)

(ii) Below INR 5 Lacs by Foreign Demand Draft (FDD)/Wire Transfer as given below: 100% payment will be released against receipt of Order Acknowledgment and Proforma Invoice

**e) Agency Commission:** The percentage of ex-works value to be paid to Indian agent in equivalent Indian currency as agency commission as applicable will have to be clearly stated in the quotation.

**f) Country of Origin:** While Country of Origin will have to be stated in the Original Invoice for payment through LoC.

**g) LoC Amendment:** LoC/FDD amendment charges due to mistake on the part of the supplier, if any, will have to be borne by the supplier.

(Manash Jyoti Pathak)  
Assistant Registrar  
Research & Development Section

**ANNEXURE – I**Ref<sup>n</sup>: IITG/RND/T111/23-24

Date: 11.10.2023

**1) Specification of Server with Dual GPU, No. of Quantity: 02**

<b>Parameter</b>	<b>Minimum Required Specification</b>
Chassis	2U Rack Mountable
CPU	Min dual 2.1GHz 24-core 150W Processor. Higher configuration can be quoted.
Memory	Min. 32DIMM slots. Min. 256 GB DIMMS scalable upto 8.0TB using DDR4 operating at 3200 MT/s
HDD Bays	Should support Up to Min. 24 SFF HDD/SSD
Hard disk drive	Min. 3 x 960GB SSD Drive
GPU Card	<b>2 x Nvidia A100 80GB GPU Card</b>
Controller	PCIe 4.0 based x8 RAID controller with 4GB Flash backed write cache, supporting RAID 0, 1, 1 TP, 10, 10 TP, 5, 6, 50, 60 with 16 SAS/SATA/NVME lanes supporting up to 16 direct-connected storage devices (SAS/SATA/NVMe).
Networking features	Server should support below networking cards: 1. Min. 1Gb 2-port network adaptors 2. Min. 10Gb Dual Port Base T Host Bus Adapter
Interfaces	Min. 3 No's of USB 3.0 support
Remote Management Software	Server monitoring software (Advanced) for ongoing management, service alerting, reporting and remote management.
Bus Slots	Server should support upto Min. eight PCI-Express 4.0 slots, atleast two x16 PCIe slots
Power Supply	Min 1600W. Should support hot plug redundant low halogen power supplies with minimum 94% efficiency
Fans	Redundant hot-plug system fans
Industry Standard Compliance	ACPI 6.3 Compliant, PCIe 4.0 Compliant, WOL Support, USB 3.0 Compliant, SMBIOS 3.2,IPMI 2.0 TPM 1.20 and 2.0 Support, Advanced Encryption Standard (AES),Triple Data Encryption Standard (3DES) SNMP v3,TLS 1.2,ASHRAE A3/A4
System Security	UEFI Secure Boot and Secure Start support Immutable Silicon Root of Trust Ability to rollback firmware Bezel Locking Kit option Chassis Intrusion detection option
Latest Operating Systems and Virtualization Software Support	Microsoft Windows Server Red Hat Enterprise Linux (RHEL) SUSE Linux Enterprise Server (SLES) Vmware
Secure encryption	System should support Encryption of the data (Data at rest) on both the internal storage and cache module of the array controllers using encryption keys. Should support local key management for single server and remote key management for central management for enterprise-wide data encryption deployment.
Firmware security	For firmware security, system should support remote management chip creating a fingerprint in the silicon, preventing servers from booting up unless the firmware matches the fingerprint. This feature should be immutable

Server Management	Software should support dashboard view to quickly scan the managed resources to assess the overall health of the data center. It should provide an at-a-glance visual health summary of the resource's user is authorized to view.
	The Dashboard minimum should display a health summary of the following:• Server Profiles• Server Hardware• Appliance alerts
	The Server Management Software should be of the same brand as of the server supplier.
Cloud Enabled Monitoring and Analytics	<ol style="list-style-type: none"> <li>Offered servers shall have cloud enabled monitoring and analytics engine for proactive management. All required licenses for same shall be included in the offer.</li> <li>Cloud Enabled Monitoring and analytics engine shall have capability to provide following: <ol style="list-style-type: none"> <li>Providing Firmware upgrade and patch upgrade recommendations proactively.</li> <li>Providing power and support entitlement status.</li> <li>Recommendations to eliminate performance bottlenecks and critical events, based on Analytics engine having capability of proactive recommendation for arresting the issues / problems.</li> </ol> </li> </ol>
Server Certification	Quoted Server should be listed in the top 3 OEM as per the latest IDC report
Warranty	3 Years comprehensive warranty

## 2) Specification of Server with Single GPU, No. of Quantity: 03

Parameter	Minimum Required Specification
Chassis	2U Rack Mountable
CPU	Min <b>dual 2.1GHz 24-core 150W Processor. Higher configuration can be quoted.</b>
Memory	Min. 32DIMM slots. Min. 256 GB DIMMS scalable upto 8.0TB using DDR4 operating at 3200 MT/s
HDD Bays	Should support Up to Min. 24 SFF HDD/SSD
Hard disk drive	Min. 3 x 960GB SSD Drive
GPU Card	<b>1 x Nvidia A100 80GB GPU Card</b>
Controller	PCIe 4.0 based x8 RAID controller with 4GB Flash backed write cache, supporting RAID 0, 1, 1 TP, 10, 10 TP, 5, 6, 50, 60 with 16 SAS/SATA/NVME lanes supporting up to 16 direct-connected storage devices (SAS/SATA/NVMe).
Networking features	Server should support below networking cards: <ol style="list-style-type: none"> <li>Min. 1Gb 2-port network adaptors</li> <li>Min. 10Gb Dual Port Base T Host Bus Adapter</li> </ol>
Interfaces	Min. 3 No's of USB 3.0 support
Remote Management Software	Server monitoring software (Advanced) for ongoing management, service alerting, reporting and remote management.
Bus Slots	Server should support upto Min. eight PCI-Express 4.0 slots, atleast two x16 PCIe slots
Power Supply	Min 1600W. Should support hot plug redundant low halogen power supplies with minimum 94% efficiency
Fans	Redundant hot-plug system fans
Industry Standard Compliance	ACPI 6.3 Compliant, PCIe 4.0 Compliant, WOL Support, USB 3.0 Compliant, SMBIOS 3.2,IPMI 2.0 TPM 1.20 and 2.0 Support, Advanced Encryption Standard (AES),Triple Data Encryption Standard (3DES) SNMP v3,TLS 1.2,ASHRAE A3/A4



System Security	UEFI Secure Boot and Secure Start support Immutable Silicon Root of Trust Ability to rollback firmware Bezel Locking Kit option Chassis Intrusion detection option
Latest Operating Systems and Virtualization Software Support	Microsoft Windows Server Red Hat Enterprise Linux (RHEL) SUSE Linux Enterprise Server (SLES) Vmware
Secure encryption	System should support Encryption of the data (Data at rest) on both the internal storage and cache module of the array controllers using encryption keys. Should support local key management for single server and remote key management for central management for enterprise-wide data encryption deployment.
Firmware security	For firmware security, system should support remote management chip creating a fingerprint in the silicon, preventing servers from booting up unless the firmware matches the fingerprint. This feature should be immutable
Server Management	Software should support dashboard view to quickly scan the managed resources to assess the overall health of the data center. It should provide an at-a-glance visual health summary of the resource's user is authorized to view.  The Dashboard minimum should display a health summary of the following: • Server Profiles • Server Hardware • Appliance alerts  The Server Management Software should be of the same brand as of the server supplier.
Cloud Enabled Monitoring and Analytics	1. Offered servers shall have cloud enabled monitoring and analytics engine for proactive management. All required licenses for same shall be included in the offer. 2. Cloud Enabled Monitoring and analytics engine shall have capability to provide following: a. Providing Firmware upgrade and patch upgrade recommendations proactively. b. Providing power and support entitlement status. c. Recommendations to eliminate performance bottlenecks and critical events, based on Analytics engine having capability of proactive recommendation for arresting the issues / problems.
Server Certification	Quoted Server should be listed in the top 3 OEM as per the latest IDC report
Warranty	3 Years comprehensive warranty

### 3) Specification of Non-GPU Server, No. of Quantity: 10

Parameter	Minimum Required Specification
Chassis	2U Rack Mountable
CPU	Min <b>dual 2.1GHz 24-core 150W Processor. Higher configuration can be quoted.</b>
Memory	Min. 32DIMM slots. Min. 256 GB DIMMS scalable upto 8.0TB using DDR4 operating at 3200 MT/s
HDD Bays	Should support Up to Min. 24 SFF HDD/SSD
Hard disk drive	Min. 3 x 960GB SSD Drive
Controller	PCIe 4.0 based x8 RAID controller with 4GB Flash backed write cache, supporting RAID 0, 1, 1 TP, 10, 10 TP, 5, 6, 50, 60 with 16 SAS/SATA/NVME lanes supporting up to 16 direct-connected storage devices (SAS/SATA/NVMe).
Networking features	Server should support below networking cards: 1. Min. 1Gb 2-port network adaptors 2. Min. 10Gb Dual Port Base T Host Bus Adapter

Interfaces	Min. 3 No's of USB 3.0 support
Remote Management Software	Server monitoring software (Advanced) for ongoing management, service alerting, reporting and remote management.
Bus Slots	Server should support upto Min. eight PCI-Express 4.0 slots, atleast two x16 PCIe slots
Power Supply	Min 1600W. Should support hot plug redundant low halogen power supplies with minimum 94% efficiency
Fans	Redundant hot-plug system fans
Industry Standard Compliance	ACPI 6.3 Compliant, PCIe 4.0 Compliant, WOL Support, USB 3.0 Compliant, SMBIOS 3.2,IPMI 2.0 TPM 1.20 and 2.0 Support, Advanced Encryption Standard (AES),Triple Data Encryption Standard (3DES) SNMP v3,TLS 1.2,ASHRAE A3/A4
System Security	UEFI Secure Boot and Secure Start support Immutable Silicon Root of Trust Ability to rollback firmware Bezel Locking Kit option Chassis Intrusion detection option
Latest Operating Systems and Virtualization Software Support	Microsoft Windows Server Red Hat Enterprise Linux (RHEL) SUSE Linux Enterprise Server (SLES) Vmware
Secure encryption	System should support Encryption of the data (Data at rest) on both the internal storage and cache module of the array controllers using encryption keys. Should support local key management for single server and remote key management for central management for enterprise-wide data encryption deployment.
Firmware security	For firmware security, system should support remote management chip creating a fingerprint in the silicon, preventing servers from booting up unless the firmware matches the fingerprint. This feature should be immutable
	Software should support dashboard view to quickly scan the managed resources to assess the overall health of the data center. It should provide an at-a-glance visual health summary of the resource's user is authorized to view.
	The Dashboard minimum should display a health summary of the following:• Server Profiles• Server Hardware• Appliance alerts
	The Server Management Software should be of the same brand as of the server supplier.
Cloud Enabled Monitoring and Analytics	1. Offered servers shall have cloud enabled monitoring and analytics engine for proactive management. All required licenses for same shall be included in the offer. 2. Cloud Enabled Monitoring and analytics engine shall have capability to provide following: a. Providing Firmware upgrade and patch upgrade recommendations proactively. b. Providing power and support entitlement status. c. Recommendations to eliminate performance bottlenecks and critical events, based on Analytics engine having capability of proactive recommendation for arresting the issues / problems.
Server Certification	Quoted Server should be listed in the top 3 OEM as per the latest IDC report

## 4) SAN Storage, No. of Quantity: 01

Sl. No	Minimum Requirement Specification	
1	Storage	Offered Storage array shall be a Hybrid array supporting both SSD and spinning drives.
2	OS and & Clustering Support	Offered storage array should support industry-leading OS platforms & clustering including Windows Server 2019 & 2022, VMware 7, Linux and UNIX operating system etc.
3	Capacity & Scalability	Offered storage array shall be supplied with Min. 60TB usable capacity using 10K RPM SAS drives.
		Storage shall be scalable to minimum of Min. 240 number of SAS SFF drives
4	Front-end Ports & Back-end Ports	Offered Storage system shall be supplied with Min. 4 * 10G iSCSI ports per controller
		Offered storage system shall support Min.12G SAS Back-end connectivity.
5	Architecture	The storage array should support dual, redundant, hot-pluggable, active-active array controllers for high performance and reliability. Offered Storage Array shall be configurable in a No Single Point of configuration including Array Controller card, Cache memory, FAN, Power supply etc.
6	Cache	Offered Storage Array shall be given with Minimum of 12GB cache per controller in a single unit. Cache shall be backed up in case of power failure for indefinite time either using batteries or capacitors or any other equivalent technology. Offered Storage shall also have optional support for Flash cache using SSD / Flash drives. Offered storage shall support at-least 8TB Flash Cache. Offered Flash cache shall be tuned for random read operations and shall remain activated even at less than 70% of random average read workload.
7	Disk Drive Support	Storage system shall support Enterprise SAS spinning drives, SSD and and near line SAS / 7.2K RPM drives.
		Offered storage array shall also have support for FIPS 140-2 validating self-encrypted drives.
8	RAID Support	Offered Storage Subsystem shall support Raid 1 , 10, 5 and Raid 6. All Raid Sets shall support thin provisioning. Vendor shall offer the license of thin provisioning for complete supported capacity of the array. Thin provisioning shall be supported with offered Flash Cache.
		Raid processing shall be offloaded to a dedicated ASIC instead of CPU. In case vendor is not supporting it then vendor shall ensure that additional 12GB cache per controller is configured to offset the raid processing workload.
9	Performance	Offered storage shall have listed benchmark for performance of more than 250,000 in Raid 5 using appropriate drives at 8k block size. Vendor shall provide documentary proof for it.
10	Replication	Offered storage subsystem shall support storage-based replication to DR location. License for maximum supported capacity of the array shall be offered. Offered storage subsystem shall support replication to multiple storage array of the same family in fan-out mode. At least 1:4 mode shall be supported.
11	Virtualization & Thin Provisioning	Offered storage shall be offered and configured with virtualization capability so that a given volume can be striped across all spindles of given drive type within a given disk pool. Disk pool shall support all listed raid sets of Raid 1, Raid 10, Raid 5 and Raid 6. Offered Storage shall be offered and configured with Thin Provisioning capability.
12	Hot Spare	Offered Storage Array shall support Global hot Spare for offered Disk drives.

13	Logical Volume & Performance	Storage Subsystem shall support minimum of 512 Logical Units. Storage Array shall also support creation of more than 120TB volume at controller level. Offered Storage shall have inbuilt performance management software. Configuration Dashboard shall show overall IOPS and MB/sec performance.
15	Load Balancing & Multipath	Multi-path and load balancing software shall be provided, if vendor does not support MPIO functionality of Operating system.
16	Array Integration	Offered storage array shall have plug-in for VMware VCenter, Microsoft System center as well as vStorage APIs (VAAI) for array integration.
17	IDC Ranking	OEM should be ranked within top 3 as per IDC report for any one of the previous four quarter in India for Storage.
18	Warranty	Three years on-site comprehensive OEM Warranty Support with 24X7 coverage and access to OEM TAC/support

### 5) KVM Switch, No. of Quantity: 01

Function	Specification
Computer Connections	Direct: 16
	Max: 256 (via cascade)
Port Selection	OSD, Hotkeys, Pushbuttons
Connectors	Console Port (Keyboard,Video,Mouse): 1 x SPHD-18 Male
	KVM Port (Keyboard,Video,Mouse): 16 x SPHD-15 Female
	FW Upgrade: 1 x RJ-11 Female
	Power: 1 x DC Jack
Switches	Port: Min. 8 x Pushbutton
	F/W Upgrade: 1 x Slide
LEDs	Switch should have LED indicators for operational features such as reflecting Online status ,Port selection & Power
Emulation	PS/2, USB
Video quality	2048 x 1536; DDC2B
Scan Interval	1–255 Seconds.
Security	Two level password security - only authorized users view and control computers; up to four users and an administrator with a separate profile for each
Auto Scan	Auto Scan feature for monitoring user-selected computers
Features	• Hot pluggable – add or remove computers without having to power down the switch
	• Buzzer on/off via hotkey and OSD
	• Firmware upgradeable
	• Rack mountable (19" system rack, 1U)
Environment	Operating temperature: 0 to 50°C
	Storage temperature : -20–60°C
	Operating humidity : 0–80% RH, Non-condensing
Cables	All connecting cable to nodes should be provided.
Warranty	3 Years onsite Comprehensive

### 6) Console

<b>Rack Console:</b>	Form factor 1 U - 17" Rack Mountable Console (with keyboard & mouse attached to the monitor)
	KVM Ports 1 x SPHD Female (Yellow)
	Power 1 x IEC 60320/C14

	Switches: Reset 1 x Semi-recessed Pushbutton
	Power 1 x Rocker Switch N/A
	LCD Control 4 x Pushbutton
	Lock: 1 x Num Lock, 1 x Caps Lock, 1 x Scroll Lock
	Input Video Resolution: 1920 x 1200 @ 60 Hz;
	Panel resolution: 1280 x 1024 @ 75 Hz
	Contrast: 1000: 1
	Luminance 250 cd/m <sup>2</sup>
	Environment : Operating temperature: 0 to 50°C degree Storage temperature : -20 to 60°C degree,
	Maximum Input Power Rating: 100-240 VAC; 50-60 Hz; 1A
	3 Years onsite Comprehensive Warranty.

### 7) Rack, No. of Quantity: 01

No.	Description
1	42U Rack Frame 600/800/1000/Steel/NRS1/ Casters Type 2, Levellers, 19" Adopter kit/Loops, Metal Door/42U
2	Integrated 2 nos of minimum PDU's with sufficient socket for all the components
3	Horz. Cable Organiser/1U/Loop
4	Certification: Degrees of Ingress Protection, IP 20 according to IEC 60529
	Degree of Impact Protection, IK 08 according to IEC 62262
	Corrosion Resistance through Salt Spray test according to ISO 9227 for 168 hours
	Protection In-house Tests - 1250 Kg
	Process validations through NABL laboratory ensures a Compliant & Robust Product
4	Powder Coating: Epoxy polyester Hybrid Powder
5	Mounting Hardware-CR (Pack of 20)
6	Made of 1.2 mm CRCA and concealed from exterior view.
	Allows provision for 4 nos. Fan mounting

### 8) 1G Switch, No. of Quantity: 01

Item	Description of Requirement
Ports	24 Port Gigabit Switch for inter node connectivity

### 9) 10G Switch,

Item	Description of Requirement
Interfaces	Min. 24 10GBase-T ports supporting 10G/1G speeds
	4 dedicated SFP+ Fiber 1G/10G ports
	800 MHz Dual Core CPU
	512MB RAM
	8MB SPI + 256MB NAND FLASH
	Latency: 10GBASE-T: <11.649 μs; 10GBASE-X SFP+: <2.619 μs
Network Protocol and	IEEE 802.3an 10GBASE-T 10Gbps Ethernet Over Copper Twisted Pair Cable

<b>Standards Compatibility</b>	IEEE 802.3ae 10-Gigabit Ethernet Over Fiber (10GBASE-LRM)
	IEEE 802.3ae 10-Gigabit Ethernet Over Fiber (10GBASE-SR, 10GBASE-LR, 10GBASE-ER, 10GBASE-LX4)
	IEEE 802.3z Gigabit Ethernet 1000BASE-SX/LX
	IEEE 802.1D Spanning Tree (STP)
	IEEE 802.1s Multiple Spanning Tree (MSTP)
	IEEE 802.1w Rapid Spanning Tree (RSTP)
	IEEE 802.1x RADIUS Network Access Control
	IEEE 802.3az Energy Efficient Ethernet (EEE)
<b>Other Specifications</b>	Auto-voice VLAN
	SNMP v1, v2c, v3
	IEEE 802.1Q Tag VLAN
	512 VLANs
	IEEE 802.1p (Class of Service)
	DSCP - L3 QoS
	Port -based ingress/egress rate limiting
	IEEE 802.3ad static or dynamic link aggregation (LACP)
	DHCP client function
	Broadcast storm control
	Port mirroring (many-to-one)
	IGMP snooping v1/v2
	IEEE 802.1x (RAIDUS)
	Access control list (ACL) - MAC, IP
	SNTP
IEEE 802.1ab LLDP	
<b>Performance Specifications</b>	Packet buffer memory (Dynamically shared across only used ports): 3 MB
	Forwarding modes Store-and-forward
	Bandwidth: 560Gbps
	Priority queues 8
<b>SERVICES - AVAILABILITY</b>	Broadcast, multicast, unknown unicast storm control
	IEEE 802.3ad - LAGs (LACP)
	IEEE 802.3x (full duplex and flow control)
	IEEE 802.1D Spanning Tree Protocol
	IEEE 802.1w Rapid Spanning Tree Protocol
	IEEE 802.1s Multiple Spanning Tree Protocol
<b>NETWORK MONITORING AND DISCOVERY SERVICES</b>	802.1ab LLDP
	SNMP v1, v2c, v3
	RMON group 1,2,3,9
<b>NETWORK SECURITY</b>	IEEE 802.1x
	Guest VLAN
	RADIUS-based VLAN assignment via .1x
	MAC-based .1x
	RADIUS accounting
	Broadcast, multicast, unknown unicast storm control
	DoS attacks prevention
	Dynamic ARP inspection

<b>QUALITY OF SERVICE (QoS)</b>	Port-based rate limiting - Egress only
	Port-based QoS
	Support for IPv6 fields
<b>MANAGEMENT</b>	Password management
	Configurable management VLAN
	Admin access control via RADIUS and TACACS+
<b>LEDs</b>	Per port Speed, Link, Activity
	Per device Power and Fan
<b>ENVIRONMENTAL SPECIFICATIONS</b>	Operating temperature : 0° to 50°C (32° to 122°F)
	Operating Humidity (relative) : 90% maximum relative humidity (RH), non-condensing
	Operating Altitude : 10,000ft (3,000m) maximum
	Storage temperature : -20° to 70°C (-4° to 158°F)
	Storage Humidity (relative) : 95% maximum relative humidity, non-condensing
	Storage Altitude : 10,000ft (3,000m) maximum
<b>ELECTROMAGNETIC EMISSIONS AND IMMUNITY</b>	CE mark, commercial
<b>CERTIFICATIONS</b>	FCC Part 15 Class A, VCCI Class A
	Class A EN 55022 (CISPR 22) Class A
	Class A C-Tick
	EN 55024
<b>Warranty</b>	5 Years Hardware replacement warranty
	Lifetime free latest firmware support
	Replacement with New Product Only No refurbished Products.

==XX==

Your Ref No.

**ANNEXURE –II**  
**COMPLIANCE CERTIFICATE**

Ref#: IITG/RND/T111/23-24

Date: 11.10.2023

Certify that we have carefully examined the NIQ terms and fully understood its implications and do hereby agree to comply with all the terms, and hereby submit this compliance certificate.

Sl. No.	General Terms and Conditions	Yes / No
01	Details of the technical features of the offered equipment vis-à-vis NIQ specification	
02	Rates quoted as per instruction	
03	Standard Technical literature on each of the items offered	
04	Warranty period agreed	
05	Valid ISO provided	
06	Validity period of quoted rate agreed	
07	EMD submitted (as applicable)	
08	PBG term agreed	
09	Delivery terms agreed	
10	Certificate of Up-to-date Sales Tax clearance, GST Registration Certificate provided	
11	Payment term agreed	
12	Penalty clause for delay agreed	
13	Literature- Printed Literature with highlight and tag on the quoted item provided	
14	Manufacturer/Authorization certificate submitted	
15	Quality certificate as claimed submitted	
16	After Sales Service term agreed and detail address & contact provided	
17	Not blacklisted by any Govt. Organizations/Institutions	

Sign. :.....  
Vendor: M/s.....

Official seal of the vendor



Your Ref No.:

**ANNEXURE-III**  
**BIDDERS DETAIL**

Ref<sup>n</sup>: IITG/RND/T111/23-24

Date: 11.10.2023

Sl. No.	Name of the company/Firm	To be filled by vendor (Documentary Proof must be attached as applicable)
01	Registered office Name & Address Details of contact person Name designation Telephone number e-mail	
02	Name & Address of service centre in Guwahati city Contact person/s Name designation Telephone number e-mail Details with contact no. of staff who will be involved in this project.	
03	Is the company/firm a registered company/firm? If yes, mention year and place of the establishment of the company and submit documentary proof.	
04	Is the company/firm registered for GST? If yes, submit valid registration certificate.	
05	List the major clients with whom your organization has been associated and submit documentary proof/PO.	

Note: Document/s if attached to the NIQ compliance Certificate the same may be referred to in the remark column above.

**Sign.** :.....  
**Vendor: M/s**.....

**Official seal of the vendor**

**ANNEXURE –IV**

**Your Ref. No:**

**INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI**

**BANK GUARANTEE FORM FOR EMD**

In consideration of the Registrar (hereinafter called the "Tenderer/NIQ Inviting Authority" or "Client") has floated tender/NIQ no. \_\_\_\_\_(hereinafter called "said tender"), for Supply and Installation of \_\_\_\_\_ as per terms and conditions mentioned in the above tender/ NIQ, M/s \_\_\_\_\_ (hereinafter called "Tenderer") has decided to participate in above tender process and agreed to production of an irrevocable bank guarantee for Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) as an Earnest Money Deposit (EMD) towards compliance of its obligations in accordance with the terms and conditions in the said tender.

We \_\_\_\_\_ (hereafter referred to as the "Bank") hereby undertake following:

1. We undertake to pay to the Client any money so demanded notwithstanding any dispute or disputes raised by the tenderer(s) in any suit or proceeding pending before any Court or Tribunal relating there to, our liability under this present being absolute and unequivocal. The payment so made by us under bond shall be a valid discharge of our liability for payment there under, and the tenderer(s) shall have no claim against us for making such payment.
2. We further agree that the Guarantee herein contained shall (indicate the name of the Bank) remain in full force and effect during the period that would be taken for the performance of the said tender, and it shall continue to be enforceable till all the dues of the Client under or by virtue of the said tender have been fully paid, and its claims satisfied or discharged, or till the Client certifies that the terms & conditions of the said tender have been fully and properly carried out by the said tenderer(s), and accordingly discharges this guarantee.
3. We further agree with the Client that the Client shall have the fullest liberty without our consent, and without effecting in any manner our obligations hereunder, to vary any of the terms & conditions of the said tender or to extend time of performance by the said tenderer(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Client against the said tenderer(s) and to forbear or enforce any of the terms and conditions relating to the said agreement, and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said tenderer(s) or for any forbearance, act of omission on the part of the Client or any indulgence by the Client to the said tenderer(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.
4. This Guarantee will not be discharged due to the change in the constitution of the Bank or the tenderer(s).
5. We lastly undertake not to revoke this Guarantee except with the prior consent of the Client in writing.
6. This guarantee shall be valid up to \_\_\_\_\_ unless extended on demand by the Client Notwithstanding anything mentioned above, our liability against this Guarantee is restricted to Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) and unless a claim in writing is lodged with us under this Guarantee shall stand discharged.

(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

Your Ref. No:

**ANNEXURE-V**

**PERFORMANCE BANK GUARANTEE**

To:

The Registrar,  
Indian Institute of Technology,  
Guwahati- 781 039

**WHEREAS** ..... (Name of Supplier) hereinafter called "the Supplier" has undertaken, in pursuance of Contract No: ....., dated: ..... 20... to supply ..... (Description of Goods and Services) hereinafter called "the order".

**AND WHEREAS** it has been stipulated by you in the said order that the Supplier shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with the Supplier's performance obligations in accordance with the order.

**AND WHEREAS** we have agreed to give the Supplier a Guarantee:  
**THEREFORE, WE** hereby affirm that we are Guarantors and responsible to you, on behalf of the Supplier, up to a total of ..... (Amount of the Guarantee in Words and Figures) and we undertake to pay you, upon your first written demand declaring the Supplier to be in default under the order and without cavil or argument, any sum or sums within the limit of ..... (Amount of Guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the .....day of ..... 20.....

Signature and Seal of Guarantors

.....  
.....  
.....  
Date.....20....  
Address:.....  
.....  
.....

All correspondence with reference to this guarantee shall be made at the following address:

The Assistant Registrar  
Research & Development Section  
Indian Institute of Technology  
Guwahati- 781 039, Assam