



INDRAPRASTHA INSTITUTE of  
INFORMATION TECHNOLOGY  
DELHI

**TENDER FOR SUPPLY & INSTALLATION OF GPU SERVERS & SWITCH'S**  
**FOR CAMPUS OF THE INSTITUTE AT OKHLA PHASE-III,**  
**NEW DELHI-110020**

**(IIIT-D/IT/GPU Servers/024/2021-22)**

## **INVITATION FOR BIDS**

Indraprastha Institute of Information Technology -Delhi (IIITD), a State University created by an Act of Govt. of NCT of Delhi, invites sealed bids for **Supply and installation of GPU Servers and Switches** (as per specifications mentioned under Scope of Work below) for its campus at Okhla Phase-III New Delhi-110020.

1. 1. Earnest Money Deposit: Exempted. Bid Security Declaration to be submitted as per Annexure-IV
2. The tender document can be downloaded from the Institute's website. Those wishing to get the copy of the document from the Institute may please deposit a non-refundable Tender Document Fee of Rs.1, 180/- (Rupees One Thousand One Hundred Eighty only) in the form of Demand draft drawn in favour of IIIT-Delhi Collections", payable at New Delhi or may deposit Rs.1, 180/-with the F & A division of the Institute and enclose the receipt with the filled up tender document. The tender fee is exempted for MSMEs/NSIC registered suppliers.
3. The last date for submission of Bid is 18<sup>th</sup> February 2022 up to 3:00 PM. The Technical Bids shall be opened on the same day, i.e., on 18<sup>th</sup> February 2022 at 3.30 PM. The Tender Document should be addressed to:

**Registrar,  
Indraprastha Institute of Information Technology-Delhi  
Okhla Phase-III  
(Behind Govind Puri Metro Station)  
New Delhi-110020.**

The document should be deposited in the Tender Box kept in the Store & Purchase department in Room no. A 108, First Floor, Old Academic Block of the Institute. Bids received after 3:00 PM will not be accepted or considered under any circumstances.

## **Bidding Procedure:**

1. Bids are invited in Two Bids System, i.e. (1) Technical and (2) Financial.
  - a. Technical and Financial bids should be sealed separately and enclosed in a sealed envelope clearly indicating separately Technical Bid for "**Supply and installation of GPU Servers and Switches**" and Financial Bid for "**Supply and installation of GPU Servers and Switches**" addressed to Registrar IIIT-Delhi, Okhla Industrial Area Phase-III, New Delhi-110020.
    - b. Technical Evaluation will be done as per the Annexure I & II**
2. Sealed quotations shall be received no later than 3.00 PM on 18<sup>th</sup> February 2022. No bids will be accepted after this date & time under any circumstances. The Institute will not be responsible for any postal/courier delay and reasons beyond the Institute's control.
3. Technical bids must contain the Bid Security Declaration, along with complete technical details as desired by this Tender. Technical bids of all the tenderers will be opened on a pre-scheduled date, time & venue. Technical bids without Bid Security Declaration will be summarily rejected. The financial Bid will be opened after evaluation of the technical Bid. Financial Bid of only those meeting the requirement of the Institute will be opened, and no representation in this regard will be entertained. The date, time of opening of the Financial Bid will be communicated later.

## Technical Specifications of GPU Servers (Supply, Installation &amp; Configuration)

## 1. Hardware Specifications of GPU Servers (Qty. - 03)

S. No.	COMPONENTS	Description	Compliance (Y/N)
H.1	<b>Processors and performance (per node - minimum)</b>	Dual ROME AMD processor with a total of 128 CPU cores with minimum 2.25Ghz, with 8 x Nvidia A100 GPU Accelerators; Minimum of 160Tflops peak performance double precision. GPU topology to CPU should be 4:1 (4GPU connected to 1CPU)	
H.2	<b>Number of GPUs and GPU Communication</b>	8 x Nvidia A100 GPU switch 40GB RAM, NV Link 3.0/ configured or NV Switch with minimum 600GB/s bidirectional communication bandwidth	
H.3	<b>Performance</b>	160TF Double-precision Performance, 5 Peta Flops AI performance, 10 Peta OPS INT8	
H.4	<b>Multi-Instance GPU</b>	Single GPU can be partitioned into as many as 7 GPU instances	
H.5	<b>Internal switches</b>	6 internal NV-Switches for GPU connectivity	
H.6	<b>System Memory</b>	Minimum 1TB DDR4, 3200 Mhz RAM / Upgradable to 2TB	
H.7	<b>GPU Memory</b>	Minimum 40GB per GPU, 320GB Per node minimum, with 1.6TB/sec of memory bandwidth	
H.8	<b>CUDA Cores</b>	Minimum 5000 or above, per GPU	
H.9	<b>Tensor Cores</b>	Minimum 400 or above per GPU	
H.10	<b>Network</b>	Minimum 8 x Single port Mellanox IB HDR Ports (200Gbps) Minimum 2x Dual port Mellanox ConnectX-6 (10/25/50/100/200Gb/sec Ethernet for storage connectivity) At Least 1x 1Gbps Rj45 Ethernet Port	
H.11	<b>Internal Storage</b>	OS - Minimum 2 X 1.92 TB NVMe RAID 1	
		Internal storage - Minimum 4 x 3.84 TB NVMe, upgradable to double the capacity	
H.12	<b>Security Features</b>	The platform should support security features embedded on the system - Self Encrypted Drives, Secure Firmware Updates, Secure cryptographic key generation	
H.13	<b>Power requirements</b>	6.5 KW or less; hot plug & redundant power supply (N+N) – (3+3) PSU	
H.14	<b>Rack space</b>	6U or less	
H.15	<b>System Network (IPMI)</b>	1Gbps network	

## 2. PRIMARY COMMUNICATION NETWORK (Qty.- 02 )

	Switch with required no of ports for completing the solution, each port must support >= 200 Gbps aggregate Link speed with 100% fully nonblocking.		
S. No.	COMPONENTS	Description	Compliance (Y/N)
C.1	<b>Switch</b>	HDR InfiniBand switch Compatible with NIC quoted for whole solution <ul style="list-style-type: none"> <li>• 40 x HDR 200Gb/s ports in a 1U switch</li> <li>• 80 x HDR100 100Gb/s ports (using splitter cables)</li> <li>• 16Tb/s aggregate switch throughput</li> <li>• Sub-130ns switch latency</li> </ul>	

		<p>Compliant with IBTA 1.21 and 1.3</p> <ul style="list-style-type: none"> <li>• 9 virtual lanes: 8 data + 1 management</li> <li>• 256 to 4Kbyte MTU</li> <li>• Adaptive Routing</li> <li>• Congestion control</li> <li>• Port Mirroring</li> <li>• VL2VL mapping</li> <li>• 4X48K entry linear forwarding database</li> <li>• On-board Subnet Manager (SM) supporting fabrics of up to 2K nodes</li> <li>• Unified Fabric Manager (UFM) agent</li> </ul>	
C.2	<b>Management</b>	Support for Out-of-band management based on RJ45 1G management port with Built-in Fabric Manager	
C.3	<b>Cables</b>	Required no of cables to suit the solution	
C.4	<b>Software &amp; Support</b>	Host Software, performance monitoring tool and other required software to complete the connectivity.	
C.5	<b>Power Supply</b>	Redundant power supply	
C.6	<b>Mounting Kit</b>	Rack mounting kit if required	
C.7	<b>Warranty</b>	3 Years Comprehensive Onsite Warranty	

### 3. Software Specifications

S. No.	COMPONENTS	Description	Compliance (Y/N)
S.1	<b>OS Support</b>	Should support Red Hat Enterprise Linux, Ubuntu Linux. Quoted OS should be under Enterprise support from OEM.	
S.2	<b>AI, HPC Software Containers, and Required DL SDKs with Support</b>	<p>Nvidia NGC (Nvidia GPU Cloud) containers with Nvidia NGC support for 3 years for each system with <b>unlimited user access</b>. The proposed system should be an NGC certified system.</p> <p>Some of the basics:            SDK/library/containers we will use in the system :            CUDA toolkit, CUDA tuned Neural Network (cuDNN) Primitives            Tensor RT Inference Engine CUDA tuned BLAS (cuBLAS) CUDA tuned Sparse Matrix Operations (cuSPARSE) Multi-GPU Communications (NCCL)            Industry SDKs – NVIDIA Deep Stream, ISAAC, DRIVE, Nemo, Jarvis</p>	
S.3	<b>Preinstalled AI frameworks</b>	<p>Installed optimized AI frameworks like Caffe, CNTK, Tensor flow, Theano, Torch with Docker containers for deploying Deep learning frameworks.</p> <p>Pre-installed Deep learning GPU Training System to train highly accurate deep neural networks (DNNs) for visual recognition (classification, segmentation, and object detection tasks), language modelling, and speech processing tasks.</p>	
S.4	<b>Scalability and Cluster software</b>	The system should be scalable with a multi-node cluster. Software support & cluster tools to be supplied along with the product. Full-stack reference designs with all of the leading Storage providers.	
S.5	<b>Warranty and Support</b>	<p>3 Years warranty.</p> <p>Warranty includes Parts, Labour, Onsite support with next business day response</p> <p>Training should be provided at the site on system configuration, running benchmarks etc.</p>	

		Terms and conditions of extended warranty (5 year), support, AMC and any related costs to be provided.	
S.6	<b>Qualifying Credential</b>	The quoted GPU Card & the quoted Server should be of the same OEM	
S.7	<b>HPL</b>	Bidder to demonstrate a minimum of 65% of HPL DP performance during installation & acceptance.	
S.8	<b>Minimum Software Support</b>	CUDA toolkit CUDA tuned Neural Network (cuDNN) Primitives TensorRT Inference Engine. DeepStream SDK Video Analytics CUDA tuned BLAS CUDA tuned Sparse Matrix Operations (cuSPARSE) Multi-GPU Communications (NCCL), Kubernetes TensorFlow, Caffe, Pytorch, Theano, Keras, Caffe2, CNTK	
S.9		All content types: Transformer for PyTorch, Tacotron2, and Waveglow 2.0 for PyTorch, SSD v1.2 for TensorFlow, ResNet v1.5 for MXNet, NCF for PyTorch, Mask R-CNN for TensorFlow2, Mask R-CNN for PyTorch, and more	
S.10		Containers: GPU Accelerated ML workflows with RAPIDS, Text Classification with BERT and NeMo, DeepStream IVA Deployment Demo, Microsoft Cognitive Toolkit, NVIDIA L4T Base, Clara Deploy Digital Pathology Image Processing Operator, OpenACC Training Materials, Clara Deploy Logging & Monitoring Server, and others	
S.11		Helm Charts: DeepStream - Intelligent Video Analytics Demo, IBM Visual Insights, DeepVison - Vehicle Inspection, GPU Operator, Conundrum Aircraft-Engine, and others	
S.12		Models: Google Speech Commands v1 – MatchboxNet, TransformerXL-Base (AMP) for Pytorch, WaveGlow LJS 256 Channels, BioBERTBaseCasedSQuADv1, Tacotron2 LJSpeech, and others	
S.13		The OEM/vendor should have SDKs available for the below which are compatible with the system provided. The SDKs should be multi-GPU capable, and should take advantage of the NVLink architecture.  <ul style="list-style-type: none"> <li>a. Clara SDK for AI assisted medical imaging and diagnostics</li> <li>b. DeepStream SDK for AI assisted Intelligent Video Analytics</li> <li>c. HPC SDK with compilers and tools for HPC applications</li> <li>d. RAPIDS SDK for GPU accelerated Data science workflows</li> <li>e. Metropolis for Smart City applications</li> <li>f. RIVA for Conversational AI applications</li> <li>g. Drive for autonomous vehicle platform</li> <li>h. Merlin for Recommender systems.</li> </ul> In addition to the above, OEM/vendor should also have pre-trained models for the above frameworks.	
S.14		<b>Specialized Software Support</b>	Consultancy and customizations of NGC containers for the following application areas:

		<p><b>1. Healthcare and Genomics.</b> Specifically, the support required will be on optimized containers for training on large scale biomedical imaging datasets, NLP models including optimized BioBERT, BERT and other transformer based models, speech and conversational models optimized and proven for healthcare settings, genome assembly and analysis of genomic sequences, edge AI applications for healthcare and consultancy support on optimizing these models for Indian datasets which may have different characteristics, diverse languages and varying quality.</p>	
S.15		<p><b>2. Autonomous Driving and Road Safety.</b> Support will be required for optimized containers for training models for processing multi-sensor data on low-resource devices. Consultancy support will be required for customizations and optimizations for data from Indian conditions, which may substantially differ from data used for existing containers.</p>	

**Performance Requirements\***

ML-Commons 0.7 Training Benchmark	<p>The following Benchmarks need to be demonstrated on a single node during installation and acceptance.</p> <p>Benchmark: Object detection, lightweight, Data set: COCO, Reference implementation: SSD Time (in Min) : 17</p> <p>Benchmark: Object detection, Heavyweight, Data set: Coco, Reference implementation: Mask RCNN Time (in Min) : 98</p> <p>Benchmark : Reinforcement Learning Dataset: GO Reference implementation: Minigo Time (in Min) : 310</p>
Training Throughput Benchmark	<ol style="list-style-type: none"> <li>1. BERT-Large model (pretraining): 3200 seqs/sec on Wikipedia</li> <li>2. ResNet-50 v1.5 model: 17000 images/sec on ImageNet</li> <li>3. Jasper model: 550 seqs/sec on Librispeech</li> </ol>

\* See QCBS based evaluation (Annexure I & II)

### **Minimum Eligibility Requirement:**

1. Bidder should be OEM/Authorized Partner/service provider of the OEM. In case the Bidder is an Authorized Partner or Service Provider, a valid Agency-ship/Dealership Certificate (**MAF specific to this Tender**) to quote on behalf of OEM should also be enclosed along with the technical Bid. **A document in support of this must be enclosed.**
2. OEM & Authorized Partner should have Sales and support office in Country. **A self-certified document in support of this must be enclosed.**
3. OEM or Authorized Partner should have a service and support office in Delhi NCR. **A self-certified document in support of this must be enclosed.**
4. The warranty provided by the Bidder should have a back-to-back arrangement with the OEM. **The declaration should be part of a Letter of Authorization and signed by a competent authority at the OEM.**

### **5. Criteria of eligibility for submission of bid documents**

Bidders who fulfill the following requirements shall be eligible to apply. Joint ventures are not accepted.

(i) Firms/ bidders must have completed satisfactorily one similar/GPU -based HPC work of value not less than Rs. 4.56 Cr. or two similar works each of value not less than Rs. 2.28 Cr. or three similar works each of value not less than Rs. 1.71 Cr. during last 7 years ending on date 30.04.2021 for the subject work

6. The Bidder should be ISO 9001 certified. **A copy of the ISO Certificate should be enclosed.**
7. The Bidder should have a support centre with a minimum of 3 relevant support engineers. **A self-certified document in support of this must be enclosed.**
8. The vendor/OEM should be able to provide 24x7 NOC & Tele support of their own if required by IIITD at agreed terms. **A self-certified document in support of this must be enclosed.**
9. The Bidder shall provide the Registration number of the firm along with the valid GST number with the PAN Number allotted by the competent authorities. **A self-certified document in support of this must be enclosed.**
10. The Bidder must not be blacklisted by the Central Government, State Government, or Government of Corporations in India. **A certificate or undertaking to this effect must be submitted.**
11. If the Bidder is an authorized partner or service provider of an OEM, **an undertaking from the OEM is required** (please enclose) stating that they would facilitate the Bidder regularly with technology/product updates and extends support for the warranty as well.
12. The Bidder must be responsible for supply, deploy and support the infrastructure.
13. If vendor /OEM does not meet its SLA, IIITD will put the fine of Rs. 2000/- per day for the first seven days and @ Rs.5, 000/- per day from 8<sup>th</sup> day onwards will be levied.
14. Bidders can seek clarifications, raise technical queries, etc., related to tender by 07-Feb-2022 via e-mail to [bhawani@iiitd.ac.in](mailto:bhawani@iiitd.ac.in), [adarsh@iiitd.ac.in](mailto:adarsh@iiitd.ac.in). And for financial queries, e-mail to [ajay@iiitd.ac.in](mailto:ajay@iiitd.ac.in). The reply to clarifications sought or queries raised will be replied to within five days by 11-Feb-2022 and uploaded on the Institute's website under <https://www.iiitd.ac.in>. Based on this the bidders may submit bids as prescribed by the due date and time. No clarifications in any other form will be provided.

**The following information must accompany the financial Bid:**

1	Name, address, and telephone number of the firm/company	
2	Name of the contact person and contact details (mobile/telephone number etc.)	
3	Name of the Bank and full address	
4	Bank Account Number	
5	PAN & GSTIN (Attach self-certified copy)	
6	Valid self-certified copy of authorization from Bidder	
7	Copy of Partnership Deed/ Certificate of registration of the company or any other document evidencing the registration of the Bidder	
8	Number of Years of Experience	
9	Details of DD towards Tender Fee: EMD:	
10	Provide the previous PO's of the same items work executed during the last three years (attested copies of the Orders to be enclosed)	
11	List of service centers, nearest location of the support centre.	
12	Turnover of the Bidder in the financial years: 2018-19 2019-20 2020-21 Please attach CA certified copy of the turnover.	
13	ISO 9000 Certification (please attach certified copy)	

I /We hereby certify that the information furnished above is full and correct to the best of my/our knowledge.

(Signature of the Authorized Signatory)  
Name:  
Office Seal.

Date:  
Place:

## TERMS AND CONDITIONS

1. The Financial Bid should be valid for a period of not less than 60 days from the date of opening of Bid.
2. Upon placing of the Purchase Order (PO), the successful Bidder is required to submit a performance bank guarantee (PBG) equivalent to 3% of the PO value within 15 days from the date of PO, failing which the EMD amount will be forfeited, and the Bidder shall be notified as blacklisted. The PBG will be valid for a period of 60 days beyond the stipulated date for cessation of the contract, which is co-terminus with the warranty period. No interest is payable on the PBG.
3. **Local Content:**  
**As per GOI guidelines (Order no. P-45021/2/2017-PP (BE-II) dated 04.06.2020 issued by DPIIT, Ministry of Commerce and Industry, Govt. of India. (It is mandatory Submit duly filled Annexure III for the same).**
4. PBG will be realized by IIIT-D in case of termination of the contract for unsatisfactory performance and/or non-performance of the contract.
5. The Product to be supplied within a period of 6-7 weeks from the date of the Purchase Order by the Institute. If the vendor fails to supply the item as quoted in the Technical & Financial bid, the EMD amount will be forfeited, and the Bidder shall be notified as blacklisted or as deem appropriate by the Institute.
6. The Bidder should have their own test and repair facility with certified engineers.
7. Bids will be opened in the presence of Bidder's representatives, who choose to attend on the specified date and time. Only one representative shall be allowed to attend.
8. Sealed Bid can be sent either by post or by messenger. The responsibility of delivery of Bid lies entirely with the Bidder.
9. 100% payment will be released only on satisfactory installation/services as per the scope of work as certified by the officer in charge of the Institute and after producing the GST invoice. Bidder does not agree to the above payment terms is requested not to submit their Bid.
10. Payment will be paid only if the required SLA as mentioned in the scope of work is met.
11. In the event of a dispute, Director IIIT-Delhi shall be the sole arbitrator, and his decision shall be final and binding on both parties.
12. IIIT-Delhi does not bind itself to accept the lowest or any other offer and reserves the right to accept or reject any or all the offers either in full or in part without assigning any reason.
13. In case the Bidder is not able to execute the work as per terms, EMD/PBG shall be forfeited.
14. Bidder should provide details of its support, certification to this effect from itself. If Bidder fails to meet the SLAs, a fine of 2000/- Rs per day for the first seven days and @ Rs. 5,000/- per day from the 8<sup>th</sup> day onwards will be levied.
15. The bidder/tenderer shall submit an undertaking on its letter head, duly signed and stamped, that none of the staff, faculty members, relatives, etc. of the Indraprastha Institute of Information Technology-Delhi are related directly or indirectly to any employees, Directors, or Key Managerial Personnel, etc. of the bidder/tenderer. In the event of the IIIT-D coming to know or pointed about the same, the bidder/tenderer undertakes to deposit a sum of Rs.1,00,000/- (Rs. One Lakh only) as a penalty with the Institute. Such bidders/tenderers shall be liable to be blacklisted and announced on the website of IIIT-D.
16. The selected bidder has to sign an agreement with IIITD on a stamp paper after issue of Purchase/Work order. The agreement is attached Annexure 'V'

**PROFORMA FOR FINANCIAL BID**

S. No.	Details	Unit Price  *All Inclusive Cost <b>(Please quote in INR only)*</b> <b>@5% GST</b>	Qty.	*All Inclusive Cost <b>(Please quote in INR only)*</b> <b>@5% GST</b>
1	GPU Server Hardware (As per the scope of work)		03	
2	Primary communication network (As per the scope of work)		02	
3	Software (As per the scope of work)			
	Discount, if any			
	Total Amount Rs.			
		Total Final Cost (in figures) with Installation at IIIT Delhi campus Okhla Phase III, New Delhi. <b>The Bidder may obtain price in Forex(USD) however the quote in financial Bid should be INR only.</b> <b><i>*If any documents are required for availing custom duty exemption, the IIITD will provide the same. Please quote price accordingly.</i></b>		

**The institute reserves the rights to purchase as advertised or part of the advertised specification/quantity.**

Please note the price should be quoted for each of the items and should be inclusive of all taxes/charges and installation at IIIT-Delhi.

***\*In terms of Notification No. 45/2017-Central Tax (Rate), dated 14/11/2017 of the Government of India, Ministry Of Finance (Department Of Revenue), vide Sr. No.2, the Indraprastha Institute of Information Technology-Delhi being a University established by an Act of the Govt. of NCT of Delhi (Delhi Act 5 of 2008) and registered with the Government of India in the Department of Scientific and Research (Regn. No. TU/V/RG-CDE (1157) 2018, dated 14.09.2018) is eligible for concessional rate of 5% GST on items as specified in the notification.***

The discount, if any, should be mentioned herein and nowhere else.

Total Cost (all-inclusive) of quantity mentioned above (in words) at IIIT-Delhi campus:

We accept that the rate quoted above shall remain valid for a period of 60 days from the last date of the tender document, i.e., 60 days from 18<sup>th</sup> February 2022. It is certified that the rates quoted above are not more than the rates charged from any Central / State Govt. Deptt. / Institution / GeM.

(Signature and Seal of the Bidder)

**Annexure I**  
**Quality and Cost Based Selection Criterion**

**Technical Evaluation - Total 40 Points**

<b>S. No</b>	<b>Particulars</b>	<b>Points System</b>	<b>Max Points</b>	<b>Points Awarded (Not to be filled by the bidder)</b>	<b>Supporting Documents Attached</b>
1	No. of deviations cited in the Technical Specifications Sheet (Hardware, H.1-H.15 and Communications, C.1-C.7) submitted by the bidder/OEM.	0   10 points 1-3   7 points 4-6   3 points >6   0 point	10		
2.1	No. of deviations cited in the Technical Specifications Sheet (Basic Software Support S.1-S.7) submitted by the bidder/OEM.	0   5 points 1-2   2 points 3 or more   0 points	5		
2.2	No. of deviations cited in the Technical Specifications Sheet (Minimum Software Support S.8-S.13) submitted by the bidder/OEM.	0   5 points 1-2   2 points 3 or more   0 points	5		
2.3	No. of deviations cited in the Technical Specifications Sheet (Specialized Software Support S.14-S.15) submitted by the bidder/OEM.	0   5 points 1   2.5 points 2   0 points	5		

2	No. of deviations cited in the Technical (Software) Specifications Sheet submitted by the bidder/OEM.	Sum of points in 2.1-2.3 above	15=5+5+5		
3	Performance benchmarks as stated in the Performance Benchmark Sheet as per <b>Annexure-III</b> .	<p>Passing <b>all 6</b> benchmarking criteria <b>and</b></p> <ul style="list-style-type: none"> <li>• the best* performer (may be multiple)   15 points</li> <li>• second best performer (may be multiple)   12 points;</li> <li>• third best performer (may be multiple)   10 points</li> <li>• fourth best and beyond (may be multiple)   8 points</li> </ul>	15		
<p>Passing <b>at least 4 out of 6</b> benchmarking criteria <b>and</b></p> <ul style="list-style-type: none"> <li>• the best* performer (may be multiple)   7 points;</li> <li>• the second best performer (may be multiple)   6 points;</li> <li>• the third best and beyond (may be multiple)   5 points</li> </ul>					
<p>Passing <b>at least 3 out of 6</b> benchmarking criteria <b>and</b></p> <ul style="list-style-type: none"> <li>• the best* performer (may be</li> </ul>					

		<p>multiple)   4 points;</p> <ul style="list-style-type: none"> <li>the second best performer (may be multiple)   3 points;</li> <li>the third best performer and beyond (may be multiple)   2 points</li> </ul>			
		<p>Passing fewer than 3 out of 6 benchmarking criteria   0 points. Any of the above benchmarking results <b>that do not meet the quality target</b> as specified in the ML-commons 0.7 training benchmark will be assigned <b>0 points</b>. All of the above benchmarking results should be supported by detailed log files, which will be used for final evaluation. Failure to do so will lead to disqualification.</p>			
<b>Technical Evaluation : Total Points Awarded (A)</b>			40		

\* best performer is computed based on average relative improvement.

For the training time benchmark:

- average\_training\_time\_score** =  $\text{average}_{\{j=1 \text{ to } 3\}}(\Delta t_{\text{task}_j} / \text{spec}_t_{\text{task}_j})$ , where  $\Delta t_{\text{task}_j} = (\text{spec}_t_{\text{task}_j} - \text{achieved}_t_{\text{task}_j})$ , where  $\text{spec}_t_{\text{task}_j}$  is the time specified in Annexure-A.

For the throughput benchmark:

- average\_throughput\_score** =  $\text{average}_{\{j=4 \text{ to } 6\}}(\Delta \text{tp}_{\text{task}_j} / \text{spec}_{\text{tp}_{\text{task}_j})$ , where  $\Delta \text{tp}_{\text{task}_j} = (\text{achieved}_{\text{tp}_{\text{task}_j} - \text{spec}_{\text{tp}_{\text{task}_j})$ , where  $\text{spec}_{\text{tp}_{\text{task}_j}$  is the throughput specified in Annexure-A

Final performance score used for identifying best performer and following ranks

- $\text{average\_score} = 0.5 * \text{average\_training\_time\_score} + 0.5 * \text{average\_throughput\_score}$

<b>Presentation Evaluation - Total 10 Points</b>					
<b>S. No</b>	<b>Particulars</b>	<b>Points System</b> (Excellent - 2 Good - 1 Poor - 0)	<b>Max Points</b>	<b>Points Awarded</b> <b>(Not to be filled by the bidder)</b>	<b>Supporting Documents Attached</b>
1	Clarity of the Technical Proposal and overall approach to implementation.		2		
2	Type and quality of User Interface including ease of operation, value added features, and innovative implementation plan to enable scalability and cost efficiency.		2		
3	Project Timelines and lead time for the supply of hardware.		2		
4	Plan for extending specialized software support.		2		
5	Proposal for connecting with existing data center infrastructure (already at IIT-Delhi)		2		
<b>Presentation Evaluation : Total Points Awarded (B)</b>			10		
<b>Overall Points Awarded (A + B) - Total 50 points</b>					
<p>Note: The bidder must score a minimum of 28 points (70%) in Technical Evaluation (A) and a minimum of 5 points (50%) in Presentation Evaluation (B) to qualify. The financial bids, for the bidders who do not qualify will not be opened and therefore, will not be considered as a part of the financial bid evaluation.</p>					

Quality score (QS) = (Technical Evaluation + Presentation Evaluation)/50\*75

Financial score (FS) = (FP/F) \* 25 , where FP is the lowest financial bid and F is the financial bid under consideration.

Final score = 75\*QS + 25\*FS

75% weightage for Quality score and 25% weightage for financial score.

## Annexure-II

<b>Performance Benchmarks</b>	
<b>The following benchmarks have to be conducted and submitted along with the technical bids. The benchmarking must be done on the proposed hardware, software and network architecture only.</b>	
<b>ML-Commons 0.7 Training Benchmark (training time for given validation accuracy)</b>	The following Benchmarks need to be demonstrated on a single node during installation and acceptance. May access benchmarking details from <a href="https://mlcommons.org/en/">https://mlcommons.org/en/</a>
	1. Benchmark: Object detection (lightweight) Data set: COCO, Reference implementation: SSD Time (in Min) : 17
	2. Benchmark: Object detection (Heavyweight) Data set: COCO, Reference implementation: Mask RCNN Time (in Min) : 98
	3. Benchmark : Reinforcement Learning Dataset: GO Reference implementation: Minigo Time (in Min) : 310
<b>Training Throughput Benchmark</b>	4. Text Data: BERT-Large model (pretraining): 3200 seqs/sec on Wikipedia
	5. Image Data: ResNet-50 v1.5 model: 17000 images/sec on ImageNet
	6. Audio Data: Jasper model: 550 seqs/sec on Librispeech

**Annexure-III**

**Declaration of Local Content**  
(To be issued by the bidder on company's letter head)

To  
The Registrar,  
Indraprastha Institute of Information Technology Delhi  
Okhla Industrial Area Phase III,  
New Delhi - 110020

**Tender Ref. No IIIT-D/IT/GPU Servers/024/2021-22 dated 28<sup>th</sup> January, 2022  
for the Supply & Installation of GPU Servers**

We, M/s\_

---

(Name of the Firm), hereby undertake that:

1. Country of Origin of Goods being offered: \_
2. We hereby declare that items offered has \_\_\_\_\_% local content.

“Local Content” means the amount of value added in India which shall, be the total value of the item being offered minus the value of the imported content in the item (including all customs duties) as a proportion of the total value, in percent.

“\*False declaration will be in breach of Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151(iii) of the General Financial Rules along with such other actions as may be permissible under law.”

Yours faithfully,

(Signature)

Name: Date:

Office Seal:

"Exempted Bid Security Declaration Form"

Date: \_\_\_\_\_ Tender No. \_\_\_\_\_

To (insert complete name and address of the purchaser)

I/We. The undersigned declare that:

I/We understand that, according to your conditions, bids must be supported by a Bid Securing Declaration.

I/We accept that I/We may be disqualified from bidding for any contract with you for a period of one year from the date of notification if I am /We are in a breach of any of the obligation under the bid conditions, because I/We

a) have withdrawn/modified/amended, impairs, or derogates from the Tender, my/our Bid during the period of bid validity specified in the form of Bid;

Or

b) having been notified of the acceptance of our Bid by the purchaser during the period of bid validity (i) fail or refuse to execute the contract if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the Instructions to Bidders.

I/We understand this Bid Security Declaration shall cease to be valid if I am/we are not the successful Bidder, upon the earlier of (i) the receipt of your notification of the name of the successful Bidder; or (ii) thirty days after the expiration of the validity of my/our Bid.

Signed: \_\_\_\_\_ (signature of the person whose name and capacity are shown)  
In the capacity of \_\_\_\_\_ (legal capacity of the person signing the Bid Securing Declaration)

Name: (complete name of the person signing the Bid Security Declaration)

Duly authorized to sign the Bid for an on behalf of (insert complete name of Bidder)

Dated on \_\_\_\_\_ day of \_\_\_\_\_ (insert date of signing)

Corporate Seal (where appropriate)

**ON NON JUDICIAL STAMP PAPER OF RS 100/-**

AN AGREEMENT made on \_\_\_\_\_ day of \_\_\_\_\_ two thousand Twenty  
One

BETWEEN

(Hereinafter called the contractor, which expression shall include its proprietor, partners, heirs, executors, administrators, legal representatives, successors and assignees) WITH REGISTERED ADDRESS.....of the one part

AND

The REGISTRAR Indraprastha Institute of Information Technology Delhi, Okhla Industrial Area Phase III, New Delhi - 110020 (hereinafter called the IIITD, which expression shall include its successors and assignees) of the other part.

Whereas the IIITD had invited Bids <Please write tender name> ; vide its Bid Document No. \_\_\_\_\_, which shall be deemed to be a part of this agreement; FOR THE SCOPE OF WORK/SUPPLY

Whereas the contractor submitted its TENDER Bid dated \_\_\_\_\_, a copy of the price bid, submitted by the contractor, is annexed hereto as Annexure;

Whereas the IIITD has accepted the Bid submitted by the contractor, on the terms and conditions mentioned in the IIITD's said Bid Document and conveyed its acceptance to the contractor; vide its letter No. \_\_\_\_\_ dated \_\_\_\_\_, AND ANY OTHER CORRESPONDENCE .....which shall be deemed to be a part of this agreement;

Whereas the contractor is agreeable to the terms and conditions mentioned in the IIITD's said Bid document;

Whereas the contractor undertakes to comply with all relevant laws like Contract Labour (Regulation and Abolition) Act, 1970; Employees' State Insurance and Miscellaneous Provisions Act, 1952; Employees' State Insurance Act, 1948; Minimum Wages Act, 1948; Payment of Bonus Act, 1972; Payment of Wages Act, 1936; Income Tax Act; GST Act etc. and to indemnify the IIITD

from the contractor's acts of omission or commission, as regards the compliance with the relevant laws;

Whereas the contractor declares that he/she/it shall own all responsibility for any act of omission or commission, as regards the compliance with the relevant laws;

AND WHEREAS the IIITD is agreeable to make necessary payment to the Contractor, at the rates mentioned in the Annexure annexed hereto and as per the terms and conditions mentioned in the IIITD's said Bid Document;

In WITNESS whereof Shri (name), (designation), the authorized representative of the contractor, for and on behalf of the contractor, has hereunto set his hand and ..... for and on behalf of the IIITD has hereunto set his hand.

(Signature of the authorized representative of the Contractor)  
Name and designation of the contractor's representative

In the presence of

1

2

(Signature of witnesses with full name and full address)

Registrar  
for and on behalf of the IIITD

In the presence of

1

2

(Signature of witnesses with full name and full address)