

**DAYALBAGH EDUCATIONAL INSTITUTE
(DEEMED TO BE UNIVERSITY)
DAYALBAGH – AGRA**

No. DEI/SCIENCE/Phy&Comp/RSP/2019-20/TDR-11

Date: September 23, 2019

SINGLE TENDER ENQUIRY

SUBJECT: PURCHASE OF GPU BASED SERVER FOR ML/DL

The request has been received from **Dr. R.S.Pavithr, Department of Physics and Computer Science,** Dayalbagh Educational Institute to purchase the above item from **M/s NVIDIA Corporation, USA** on proprietary basis. The proposal submitted by **M/s CCS computer Pvt.Ltd** and quotation is attached.

The above documents are being uploaded for open information to submit objections, comments, if any, from any manufacturer regarding proprietary nature of the equipment/item within 7 days from the date of issue of this notice giving reference No. **DEI/SCIENCE/Phy&Comp/RSP/2019-20/TDR-11** Dated **23-09-2019**. The necessary documentation may be submitted to us in support of your intent/ comments/ objections for our consideration. The intent/ comments/ objections should be received by office of Registrar, Dayalbagh Educational Institute, Dayalbagh, Agra (email: registrar@dei.ac.in) on or before 30-09-2019 up to 10:00 AM failing which it will be presumed that no other vender has any comments to offer, and the case will be decided on the merit.

REGISTRAR



Date: 5th September 2019

To,

The Director,
Dayalbagh Educational Institute,
Agra Uttar Pradesh

Dear Sir,

Sub: NVIDIA DGX 1 - Proprietary Certificate

We would like to bring to your kind notice the following points regarding Nvidia DGX 1:

1. Nvidia DGX 1 the proprietary product of NVIDIA Corporation, USA and is sold through a network of distributors and partners worldwide.
2. DGX 1 is specifically built for accelerating AI research.
3. DGX 1 delivers a ready-to-use, optimized software stack that includes access to today's most popular frameworks, GPU accelerated software tools and specialized Software Development kits like cuDNN, cuBLAS, NCCL, CUDA® toolkit, Kubernetes and NGC containers.
4. DGX 1 have GPU-accelerated libraries and development tools based on the unique NVIDIA® CUDA® Toolkit. These software tools are optimized to provide best performance on GPUs and help in advanced, computationally intensive research using parallel computing methodologies.

Kindly revert in case any clarifications are needed. Thanking you and assuring you of our best support always.

With best regards,
For **Nvidia Graphics**,

A handwritten signature in black ink, appearing to read "Shridhar".

Shridhar Garge



Date: September 5th, 2019

To,

The Director,
Dayalbagh Educational Institute,
Agra Uttar Pradesh

Sub: Manufacturer Authorization Form

Dear Sir,

This is with reference to your above enquiry. We thank you for your interest in Nvidia GPU based solution.

We hereby authorize CCS Computers Private limited, 3rd Floor, Skipper House, 62-63, Nehru Place, New Delhi – 110019 to submit quote, supply, install and provide after sales support for our range of products quoted by them to meet the above-mentioned tender requirements.

Kindly revert in case of any clarifications. Thanking you and assuring you of our best support at all times.

Yours Sincerely,
For NVIDIA Graphics

A handwritten signature in black ink, appearing to read "Shridhar", written over a horizontal line.

Shridhar Garge
Head-Channels & Alliances, Nvidia - South Asia



Ref. CCS/2019-20/DEI/0485

Dated: Sept 5, 2019

To
The Director,
Dayalbagh Educational Institute

Subject: Quotation for setting up AI Centre of Excellence at Dayalbagh Educational Institute

Dear Sir,

This is with reference to the above mentioned subject regarding Quotation for setting up AI Centre of Excellence at Dayalbagh Educational Institute. In this regard, we are enclosing herewith the 'Quotation' as per your requirement.

CCS being an CMMIL-3, ISO/IEC 20000, ISO/IEC 27001, 9001:2015, certified Company' will ensure smooth transition and subsequent operation during the tenure of the support proposed.

CCS understands the Business Critical Applications of their client/s and has adapted specialized Services to be provided aside use of selective Technology Tool wherever business demands ITIL Best Practices.

We hope that commercial comes in line with your requirement, in case you require any further clarification kindly feel free to contact to undersigned.

Thanking you and assuring our best services at all times.
With best regards

For **CCS Computers Pvt. Ltd.**



Rajesh Bamzai
Director
9999914515
rbamzai@ccscomputers.co.in



CCS COMPUTERS PRIVATE LIMITED

3rd Floor, Skipper House, 62-63, Nehru Place, New Delhi-110019 (India)
Phone : +91-11-26463959, 26233959, 26423959, 26453797, 26433959
Fax : +91-11-26288463, 26224339
E-mail : contact@ccscomputers.co.in Website : www.ccscomputers.co.in





Bill of Material

S. No.	Item Description	Qty
1	DGX-1 Server, P2787, V100 32 GB, with 3 years of Support	1

Commercial

Item Description	Qty	Unit Price	Total Amount (INR)
Deep Learning System DGX-1, with 3 years of support	1	1,25,75,000.00	1,25,75,000.00
Total Cost			1,25,75,000.00
Co-investment by Nvidia for Education Customers @ 30 %			37,72,500.00
Investment by DEI for Setting up of AI CoE			88,02,500.00
Eighty Eight Lac Two Thousand Five Hundred Rupees and Zero Paise Only.			

Unmatched Deliverables from CCS Computers will include the following:

- DGX-1 Hardware and build-in Deep Learning Software Stack.
- Deployment of the AI/DL Infrastructure.
- Curriculum design with Nvidia Teaching Kit for UG/PG/PHD Students and Research Scholars.
- 5 days Training for your Faculty and Technical Staff Members.
- Code Optimization in your Research Work.

Terms & Conditions:

Taxes : Extra as per applicable GST @ 18%
Payment Terms : 30% advance and balance 70% on delivery
Warranty : 3 Years on-site warranty form the date of shipment
Delivery : 6-8 weeks from the date of firm supply order
Validity : This quote is valid till 30th Sept, 2019

Note : Co-investment form Nvidia is subject to approval.

Thanking you and assuring our best support and services at all times.

For CCS Computers Pvt. Ltd.



Rajesh Bamzai
Director
9999914515
rbamzai@ccscomputers.co.in



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TECHNICAL SPECIFICATIONS		
Server Specifications & details:		
Quantity – 1		
Components	Description	Compliance Yes/ No
Processor	Dual 20-core intel Xeon e5-2698 v4 2.2 ghz or better	
System Memory	512 GB DDR4	
GPU	8 x GPUs (Tesla V100 SXM2)	
Performance	On or above 1 Peta-FLOPS mix precision	
GPU Memory	256 GB (8X32) total system	
CUDA Cores	Approx. 5000 per GPU	
Tensor Cores	Approx. 600 per GPU	
Power Requirements	4KW or less with hot-plug & redundant power supply	
Rack space	4U or less	
Storage	4X 1.92 TB SSD RAID 0 or better	
System Network	Dual 10 GbE Up to 4 IB EDR	
GPU communications protocol	NVLink 2.0/ configured in hybrid cube-mesh NVLink network topology	
OS Support	Red Hat Enterprise Linux /CentOS/ Ubuntu Linux	
USB Port	2	
RS232 Serial Port	1	
VGA Port	1	
Ethernet (RJ45) Ports	2	
Operating Temperature Range	Normal AC temperature	
Number of Simultaneous Users (Minimum)	64	
Software Support (Directly from OEM with updates & upgrades). Support portal should be enabled for min. 3 users. Partner has to help build first model on-site with limited data-set. OEM Letter head should state type of support during 3 years with SLA.	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	
Time to Train a ResNet-50 model on 1.28Million images	Not more than 150 minutes. Published on respective OEMs website with quoted server model.	
Time to Train a SSD model on 118K images.	Not more than 30 minutes. Published on respective OEMs website with quoted server model.	
Time to train a GNMT model on 4.5M sentence pairs of English-German.	Not more than 20 minutes. Published on respective OEMs website with quoted server model.	

OEM history	1. The OEM should provide a proof at least 10 unique sites in India where the quoted model is being used for Development work in the areas of Artificial Intelligence (ML/DL).	
	2. The OEM should have min. 05 installation with similar system for Deep learning & Machine learning in different institutes (preferably in Gov. of India Labs, IITs, IISc etc.). The Bidder should have 3 such installation in past & should have on-going support to customers on ML/DL.	
Containers	The solution should have ready to use container for different Big- data, ML, DL stack optimized for given architecture and configured to utilize GPUs fully.	
Scalability & Cluster software	1. System should be scalable with multi node cluster. Software support & cluster tools to be supplied along with product. The system should also be qualified with min. 3 storage & 3 network vendors in cluster mode. Reference architecture for the same should be available on OEM website.	
	2. Proposed architecture should be tested and verified by OEM jointly and proof for the same to be submitted on OEM letter head. The testing should also prove that architecture (combination of Server/storage/network) is designed jointly to get best optimized performance, deployment to be made quickly and have minimum overheads.	
	3. The solution provided should be highly scalable and should have reference architecture available for testing.	
	4. The proposed solution should be cloud scalable in future. The solutions should be integrable with different storage vendors (min. 3)	
Certifications	1. The solution given for ML/DL workload should be certified by the respective OEM vendor to act as verified, tightly coupled architecture. Public document for the same should be available. All the supporting document for the same should be submitted along with bid.	

Warranty & Support	1. 3 Years standard	
	2. The solution should be supported for 3 years including all spare parts, software stack, DL frameworks and contract for the same should be with OEM directly.	
	3. During the warranty all the updates and upgrades for software should be given for free.	
Training	1. Bidder has to provide 5 days training on system administration, Deep learning & Machine learning, Frameworks, Practical's with few popular modules & Inferencing. Bidder should provide NVIDIA certified trainer certificates to faculty/staff who completes the 5 day training.	
	2. Bidder has to provide 2 days training on Deep learning & Machine learning, Frameworks, Practical's with few popular modules & Inferencing every 3 months for next 2 years.	
	Bidder should provide support for designing the curriculum/content for school/UG/PG ML/DL courses	
Manufacturer Authorization letter	Bidder should be an authorization reseller of the Original equipment manufacturer and should provide an authorization letter from OEM	