INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
MATERIALS MANAGEMENT DIVISION
Powai, Mumbai 400076

Purchase Requisition No. 1000015725 (SRM/RFX No. 6100000415)

Technical Specifications

High performance computing infrastructure/AI Supercomputer System

NVIDIA DGX Station/AI Supercomputer with minimum of following specifications.

HARDWARE SYSTEM SPECIFICATIONS:

Workstation:	NVIDIA DGX Station
GPUs:	4X Tesla V100
TFLOPS (Mixed precision):	500
GPU Memory:	128 GB total system
NVIDIA Tensor Cores:	2,560
NVIDIA CUDA ® Cores:	20,480
CPU:	Intel Xeon E5-2698 v4 2.2 GHz (20-Core)
System Memory:	256 GB RDIMM DDR4
Storage: Data:	3X 1.92 TB SSD RAID 0, OS:1X 1.92 TB SSD
Network:	Dual 10GBASE-T (RJ45)
Display:	3X DisplayPort, 4K resolution
Additional Ports:	2x eSATA, 2x USB 3.1, 4x USB 3.0
Acoustics:	< 35 dB
System Weight:	88 lbs / 40 kg
System Dimensions:	518 D x 256 W x 639 H (mm)
Maximum PowerRequirements:	1,500 W
Operating TemperatureRange:	10–30 °C

Comprehensive warranty: 3 years

SOFTWARE SYSTEM SPECIFICATIONS:

Software:
Ubuntu Desktop Linux OS, Red Hat Enterprise Linux OS, DGX Recommended GPU Driver
NVIDIA HPC SDK
Nvidia CUDA Toolkit
DGX Software Stack
HPC containers
NVIDIA DIGITS™ deep learning frameworks
NVIDIA HPC SDK (e.g. cuDNN, cubLAS, NCCL)

	RAPIDS open source libraries NVIDIA drivers NVIDIA Container Runtime for Docker, GPU-aware Kubernetes from NVIDIA
User Sought Applications:	**LAMMPS** (Large-scale Atomic/Molecular Massively Parallel Simulator) for molecular dynamics simulations. **VASP** (Vienna Ab Initio Simulation Package) **NAMD** for high-performance simulation of large biomolecular systems. **Quantum Espresso**

SCOPE OF WORK:

- Vendor to provide the solution in a package.
- Vendor to install all the user sought applications on the system and configure it accordingly.Any license requirement would be provided by the user/IITB.
- Vendor to setup optimal compilation of LAMMPS, VASP, NAMD, Quantum Espresso, as well as our homegrown codes.
- The same workload running on DGX Station could be effortlessly migrated to an NVIDIA DGX-1™, NVIDIA DGX-2™, or the cloud, without modification.
- The Machine should be whisper-quiet and water-cooled without needing a data center and should run on a room temperature.
- OEM to directly provide training and support. OEM's support should include:
    - Access to the latest software updates and upgrades
    - Direct communication with NVIDIA technical experts
    - Searchable knowledge base for how-to articles, application notes
    - Timely resolution through support portal and 24x7 phone access
    - Lifecycle support for NVIDIA DGX Station Deep Learning software
    - Hardware support, firmware upgrades, diagnostics, remote and onsite resolution of hardware issues
    - Cloud management

TERMS & CONDITION:

1. Vendor should quote in INR only for this requirement. They should quote a single bundled price including all the scope of supply, deploy and support.
2. Vendor must have proven record of deploying such solutions.
3. MAF is mandatory to quote in case OEM is not quoting directing.
4. A reduced rate of GST must be considered while quoting as the procurement would be for a research purpose. All the required document would be provided in this regard.