

Clarification				
Tender No. IITJ/SPS/2020-2021/69 dated 18-11-2020				
Name of Tender: Designing HPC Cluster Solution				
Query Ref	Original Clause (as in the prebid	Requested Clause	OEM/Bidder's Comment	Clarifications (IITJ)
Clause 13.24.V, Page 23	Requirement of Registration (O.M. No. F.No. 6/18/2019-PPD dated 23-07-2020) A Bidder is a person employed to do any act for another, or to represent another in dealings with third person.	With reference to the 13.24 and subsequent points under this para, will 'OEM' will be considered as bidder here and will this clause be applicable to OEM as a 'beneficiary'	There few OEM who have their ownership / incorporation in the country sharing land borders with India but the product manufacturing facilities are in countries with non border sharing with India. Will the OEM be considered as beneficiary of order.	No clarification/No amendment required.
Bidder/OEM Evaluation, Page 12	Number of years the OEM has been engaged in HPC rack-based cluster supply, installation, support and maintenance (it will be counted from the date of supplied PO in the technical bid, irrespective of private or public sectors) in India. PO must be attached as a proof of evidence.	Please allow world wide POs/Public documents like Top 500 list to show relevant HPC experience for OEM	Many OEM may have been present in HPC domain in worldwide for long and and may got their first order in India later, since its for the experience of HPC so worldwide experience of OEM should be considered, and alos public documents like TOP 500 list and India top 100 lists should be cosidered as proff inplace of PO as for many customers due to confidentiality clause does not allow to share tehir PO copies.	No clarification/No amendment required.
Bidder/OEM Evaluation, Page 12	Number of years the OEM has been engaged in HPC rack-based cluster supply, installation, support and maintenance (it will be counted from the date of supplied PO in the technical bid, irrespective of private or public sectors) in India. PO must be attached as a proof of evidence.	Pls clarify of a particular OEM has acquired an HPC OEM recenty then will the past experience of HPC OEM which got acquired will be counted for current existing OEM.	As many current OEM has has got their HPC experience by acquiring another HPC OEM/ company.	In case of merger or acquisition, past experience will be counted.

Technical Evaluation, Page 13	No. of deviations cited in the Technical Compliance Sheet submitted by the bidder/OEM. However, the following deviations will not be allowed:	Pls clarify does this means except the two points mentioned in this clause deviations are allowed specifically in PFS features.		Higher performance would not count as deviation. However, the bidder is required to provide supporting document justifying higher performance by the proposed configuration.
Bidder/OEM Evaluation, Page 12	Number of HPC rack-based cluster installations and supply executed by the bidder/OEM (as on date of submission including public and private sectors) in India. PO must be attached as a proof of evidence.		Please clarify that no.of installation of OEM and bidder will be added together then it will be considered.	No of installation will be added together.
Technical Evaluation, Page 13	Performance benchmarks as stated in the Performance Benchmark Sheet as per Annexure-V.	In all the askd benchmark if someone is best in any one or two, will that OEM be considered as best.		The technical committee will take decision during evaluation.
Bidder/OEM Evaluation, Page 12	Cumulative turnover of OEM in last three financial years from Hardware supply, maintenance and Support service activities of rack based HPC servers only in India.	Please change this clause to total turnover instead of only HPC turnover	At finance level separate turnover is not maintained for HPC cases, in above clauses we are already counting relevant HPC cases for experience and for India HPC cases as well, so this gets repetitive. Also it is difficult to furnish separate document for HPC turnover.	No clarification/No amendment required.
Bidder/OEM Evaluation, Page 12	Number of HPC rack-based cluster installations and supply executed by the bidder/OEM in any PSU/Autonomous Bodies declared by the Govt. of India/Educational Institutions (as on date of submission). PO must be attached as a proof of evidence.	This should be changed to any PO for servers/storage from PSU/Autonomous Bodies declared by the Govt. of India/Educational Institutions (as on date of submission)	This clause is repetitive of first two clause as there also we are asking Pos inclusive of Govt. Autonomous bodies in India. So the bidder who is scoring in first two point will continue to score here as no criteira is being chnged. For relevant HPC experience we are already binding bidder / OEM in first two clause	No clarification/No amendment required.

Clause 13.2, Page 17	Tender asks for Security Deposit for an amount equal to the 10% of order value to be submitted		As per latest Govt of India's notification this %age has been revised to 3%, request you to kindly revise the Performance Security amount %age accordingly	Suitable corrigendum will be published.
Clause 7.1, Page 5	EARNEST MONEY DEPOSIT		We request you to allow bidders to submit Undertaking as per GFR - 2017, Rule 170(iii) in lieu of Earnest Money Deposit (EMD). Kindly confirm	Suitable corrigendum will be published.
Clause 8.2, Page 10	QCBS (quality and cost-based selection) having 70% weightage for technical bid and 30% based for financial bid respectively		Since Materials supply in this case holds more than 90% of the total cost thus, only 30% weightage to Financial bid may on one hand lead to major loss to exchequer and on the other hand do major degradation of the financial bid of most economical bidder. Thus , Our request is to please give 70% weightage to financial bid and 30% weightage to technical bid. Even India's largest purchase of HPC under National Supercomputing Mission by GoI also followed above suggested schema for QCBS.	No clarification/No amendment required.
CONDITIONS OF CONTRACT 13.13, Page 20	Country of origin: Country of origin of the quoted item should be mentioned in the offer in case of imported item.		will the ' Country of origin" for products will be considered as per the Govt. Of india circular... and will also be same applicable on the Country of registration / incorporation/ fomation of OEM	As per Govt. of India norms.

<p>Bidder/OEM Evaluation, Page 12</p>	<p>Bidder/OEM Evaluation - Total 40 Points</p> <p>a. OEM with presence in Rajasthan will get 6 points b. OEM having at least 4 offices in India will get 4 points c. OEM having at least 1 offices in India will get 1 point</p>		<p>Similar to your Tender Point (S.No. 2 – Page No.12) where in you intended to award 0 point for OEM not having any HPC installation in India – similarly in those lines kindly add an entry value for - 0 Points to in question criteria as well. Thus kindly add option d. OEM having no office in India will get 0 point.</p> <p>Its notable that some of the largest HPC provider OEMs with a huge installation base at Top Govt Organisations in India and are even part of National Supercomputing Mission of Govt of India do not have office in India but operate thru authorized partners and has been qualified by Govt of India for its largest ever purchase of HPC.</p>	<p>No clarification/No amendment required.</p>
<p>Page 32</p>	<p>Rack: Required PDUs and accessories must be provided by the vendor</p>		<p>Are PDUs to be supplied by Bidder? Kindly clarify And some of the Server/Storage units shall require depth of the Rack of 1400mm – kindly confirm existing Rack Units with IIT Jodhpur can meet such needs or will you provide such racks at your data centre/server room?</p>	<p>Yes PDUs to be supplied by the bidder. The server Rack available with the institute is 1000mm. In case the solution required different size of rack, it has to be provided by the bidder along with the solution within the same cost.</p>
<p>Section 6.7, Page 34</p>	<p>Intel Cluster Studio - for Academic</p>		<p>Incase, a bidder is quoting AMD based solution, Intel based compiler is mandatory to include?</p>	<p>Yes</p>

Annexure-V, Page 39	The benchmarking must be done on the proposed hardware, software and network architecture only. The OS must be CentOS 64 bit version only.		Kindly advise on the node count to be used for benchmark submission. Can we use upto 4 nodes and extrapolate for the 70 TF (Rmax) solution ?	No
Annexure-V, Page 39	The benchmarking must be done on the proposed hardware, software and network architecture only. The OS must be CentOS 64 bit version only.		Kindly allow a tolerance of upto 3 % in the timings during acceptance, since the benchmark systems and the proposed systems can have some variations in the Hardware and Software environment. Hence, the request.	No clarification/No amendment required.
Page 39	Annexure- V Performance Benchmarks		Kindly allow the benchmarks to be done on the same family of the CPUs with different SKUs, since the benchmark centres maynot have identical CPU SKUs for benchmarks. Also allow us to use RHEL/SLES in lieu of CentOS with commitment to demonstrate the benchmarks.	No
Page 39	HPL Benchmark		Is any particular implementation of BLAS/FFT library to be used for this benchmark?	No
Section 1.13, Page 24 Section 2.13, Page 26 Section 3.12, Page 27 Section 3.23, Page 27	Optimum no. of Cooling fans.	Please consider amending to: Redundant & hot-plug fans. Should not require any wire connection / disconnection for repairs	HPC systems can generate a lot of heat. And fans are often the first point of failure. These should be replaceable without system shutdown & with ease. This is standard feature	No clarification/No amendment required.

Section 1.3, Page 24	Processor: Max. 2 nos. x86 CPU, with minimum 20-cores, 2.5GHz or more. Processor quoted should of same make as the CPU of compute nodes & of the latest generation	Max. 2 nos. x86 CPU, with minimum 20-cores, 2.5GHz or more. Processor quoted should of same make as the CPU of compute nodes & of the latest generation. Only processors generation with verifiable future roadmap should be quoted	Please clarify, here IITJ asked for total 20 cores in a server or we can consider 2x 20 cores of processors in a head node. Also Please amend to: Max. 2 nos. x86 CPU, with minimum 20-cores, 2.5GHz or more. Processor quoted should of same make as the CPU of compute nodes & of the latest generation. Only processors generation with verifiable future roadmap should be quoted	Suitable corrigendum will be published.
Section 1.5, Page 24 Section 2.5, Page 25 Section 3.5, Page 26	Memory:- Memory should operate at the maximum frequency supported by the quoted processor.	Please amend to: "Memory Memory should operate at the maximum frequency supported by the quoted processor. The Motherboard shall support upto 3200MHz DDR4 for future upgradability in line with point 8.6 of Additional Characteristics of the Overall Solution"		No clarification/No amendment required.
Section 1.9	At least 2 number of Gigabit ports on board.	Please remove " On board"		No clarification/No amendment required.

will	Compute Node minimum 70 Tflops Sustained Performance. The TFlops need to be measured using open source HPL.	Compute Node minimum 70 Tflops Sustained Performance. The TFlops need to be measured using open source HPL or optimized HPL	<p>Since the purpose of LINPACK is to show the best performance of the given technology, it's appropriate to permit optimizations done by bidders or the technology providers to achieve the best LINPACK performance. Please note that even TOP500(http://www.top500.org) allows for performance improvements and efficient formulation of classic HPL. Also, there is no such restrictions even by the HPL founder Jack Dongarra</p> <p>We understand that this helps demonstrate the microprocessors manufacturer and vendors technological capability to provide optimized performance. Hence request the respected committee to allow HPL optimization by vendors/technology providers to demonstrate the best result on their hardware.</p>	No clarification/No amendment required.
Section 2.10, Page 26	Management Port : At least 1 dedicated 1Gbps management port with cable	Management Port: At least 1 dedicated 1Gbps management port with cable either at the node or chassis level.	Kindly change it to "At least 1 dedicated 1Gbps management port with cable" either at the node or chassis level, since some of the dense servers come with a management port at the chassis level.	Suitable corrigendum will be published.

Section 2.17, Page 26	Authentication: Directory services (AD, LDAP) based authentication		Please clarify, the AD Authentication services will be featured by Operating system software not by server hardware or if any other requirement so please elaborate.	No clarification/No amendment required
Section 2.18, Page 26	Compute Node : Security Sub- component quality assurance		We request you to please allow OEMs to submit ISO 9001:2015 certificate (which is for quality assurance only) in order to confirm sub component quality assurance , instead of issuing an ad hoc letter.	No clarification/No amendment required.
Section 2.18, Page 26	Compute Node : Security Sub- component quality assurance	System level assurance	Since our systems are manufactured in our factories will all required testing conducted, we provide system level assurance.	Suitable corrigendum will be published.
Section 2.19, Page 26	Server Security - Compute Nodes: Hardware root of trust or equivalent, automatic secure BIOS recovery, cryptographically signed firmware update, configuration and firmware drift detection, protection against compromised firmware execution	Hardware root of trust or equivalent, cryptographically signed firmware update, configuration and firmware detection, protection against compromised firmware execution	Kindly change it to "Hardware root of trust or equivalent, cryptographically signed firmware update, configuration and firmware detection, protection against compromised firmware execution", since some of the dense Servers do not support 'automatic secure BIOS recovery and firmware drift detection". These features can be done manually.	Suitable corrigendum will be published.

Section 2.19, Page 26	Server Security - Compute Nodes: Hardware root of trust or equivalent, automatic secure BIOS recovery, cryptographically signed firmware update, configuration and firmware drift detection, protection against compromised firmware execution	Since different OEMs use different terminology for same features thus we request to kindly amend the point as below covering more terminologies: Secure BIOS recovery Cryptographically signed firmware update Configuration and firmware drift detection or Password locked firmware with check mechanism Protection against compromised firmware execution or trusted execution environment		Suitable corrigendum will be published.
Section 2.2	Rack Mount up to 2U or lesser		Kindly clarify whether Multi Node Systems with multiple independent & serviceable nodes in a single cabinet is allowed or not. Important to note: almost all HPC Clusters in India/outside are based on such systems only.	Yes
Section 2.3, Page 25	Max. 2 nos. x86 CPU, supporting min. 2.3 Tflops theoretical performance per CPU. Processor quoted should be only of the latest generation of the quoted OEM.	Max. 2 nos. x86 CPU, supporting min. 2.3 Tflops theoretical performance per CPU. Processor quoted should be only of the latest generation of the quoted OEM. Only processors generation with verifiable future roadmap should be quoted	This will prevent quoting products which do not have a roadmap of development & support	No clarification/No amendment required.

Section 2.4, Page 25	Min. 256GB memory. Expected 4GB per processor core or more. Memory DIMMs should be populated such that all memory channels of both the processors are equally populated (balanced memory configuration)	Min 4GB per processor core or more. Memory DIMMs should be populated such that all memory channels of both the processors are equally populated (balanced memory configuration)	Since IIT Jodhpur expectation is to have minimum memory of 4GB/core, we request to modify it accordingly rather than specifying memory requirement at node level. Performance of the HPC system is cumulative of various factors such as hardware and software and is not a function of just memory.	The required RAM is minimum 256 GB and expected to be around 4GB per core. However, the evaluation will be done based on minimum 256 GB
Section 2.6, Page 25	Minimum 6Gbps SAS/SATA controller supporting RAID-1	Please amend to: Minimum 12Gbps SAS/SATA controller supporting hardware RAID-1	12Gbps is a default now. Software RAID is way slower than hardware RAID	No clarification/No amendment required.
Section 2.6, Page 25	Minimum 6Gbps SAS/SATA controller supporting RAID-1	Minimum 6Gbps SAS/SATA controller supporting RAID-1 OR Intel Virtual RAID on CPU (Intel VROC)	Intel® VROC is a data center quality product with performance and CPU Utilization metrics befitting such applications. New NVMe enabled hardware RAID HBAs are new to the market as well. Performance does vary depending on configuration and testing parameters, but generally, data transfer rates are comparable between the two technologies. Key Benefits of Intel VROC Use NVMe drives to their full potential Fewer hardware queues Bootable RAID Host Insert/Surprise removal Closes RAID 5 write hole LED Management Cost-effective and simple	No clarification/No amendment required.

Section 2.7, Page 25	Hard disk drives : At least 1 x 480GB SATA Enterprise GRADE SSD (3 DWPD Endurance)	1 x 480GB SATA Enterprise GRADE /M.2 SSD	Kindly change it to "1 x 480GB SATA Enterprise GRADE /M.2 SSD" and relax on the DWPD requirement, since some of the dense servers come with higher performing M.2 disks.	Suitable corrigendum will be published.
Section 2.8, Page 25	IO slots in the compute nodes : Out of which at least 1 slot vacant after populating all Add on Cards.	Remove	Kindly delete this since dense servers may not have a free slot after populating the add on cards. CCS: asked to increase from 2 to 3, possibly trying single node chassis	Suitable corrigendum will be published.
Section 2.9, Page 25	Network interface: At least 2 x 1Gbps	Network interface: At least 1 x 1Gbps	Kindly change it to "at least 1 x 1Gbps' since some of the dense servers don't have 2 x 1Gbps port per node. As such, we will need only one 1G port for configuring the Admin network. Console network will be through a separate management port.	Suitable corrigendum will be published.
Section 3.13, Page 27	Operating System: Should support the latest version of 64-bit CentOS/Ubuntu/Redhat	For virtualization nodes, KVM (open source) based virtualization software or hypervisor will be used in these nodes. Please confirm		No clarification/No amendment required.

Section 3.3, Page 26	Processor: Max. 2 nos. x86 CPU, with minimum 20- cores, 2.5GHz or more. Processor quoted should of same make as the compute nodes & of the latest generation	Please clarify, here IITJ asked for total 20 cores in a server or we can consider 2x 20 cores of processor in a virtualization node. Also amend to: Max. 2 nos. x86 CPU, with minimum 20-cores, 2.5GHz or more. Processor quoted should of same make as the CPU of compute nodes & of the latest generation. Only processors generation with verifiable future roadmap should be quoted		Suitable corrigendum will be published.
Section 3.4, Page 26	Min. 4GB per processor core or more. Memory DIMMs should be populated such that all memory channels of both the processors are equally populated (balanced memory configuration)	Please amend to: Min. 4GB per processor core or more. Memory DIMMs should be populated such that all memory channels of both the processors are equally populated (100% balanced memory configuration)		No clarification/No amendment required.
Section 3.6, Page 26	12Gbps SAS controller supporting RAID-5	We request that this clause be amended as "12Gbps SAS controller supporting RAID 5 with min 2GB dedicated cache memory. "	This help performance for this 4 x SAS disk system	No clarification/No amendment required.

Section 4.10	All PFS features of the file system mentioned in the OEM datasheet must be included. Stripped down versions are not accepted.	Delete	This is irrelevant to open source PFS	Suitable corrigendum will be published.
Section 4.13, Page 31	Data Transfer: The Bidder/OEM needs to transfer data from the existing NAS storage of IIT Jodhpur.		Please clarify the capacity of data which needs to be migrated from NAS storage.	About 100 TB
Section 4.18, Page 30	The system must be able to support Anti-Virus Scanning through Internet Content Adaptation (ICAP) protocol or any equivalent solution.	Remove		Suitable corrigendum will be published.
Section 4.21	The system with battery backed 128GB cache or more across the controller with an ability to protect data on cache if the system fails and it results into controller failure. The cache on the storage should have battery backup. Cache shall be dynamically managed for both Read and Write operations.	The NAS should have battery backed 128GB cache or more across the controller with an ability to protect data on cache if the system fails and it results into controller failure. The PFS storage should preferably be separate device from NAS. If a common storage device is proposed, the PFS should have cache in allocated for itself in addition to the 128GB cache mentioned above. Workload of either NAS or PFS should not eat into each other's resources. A published whitepaper documenting such deployment should be submitted and benchmarking for 5GBps PFS throughput would have to be carried out while running NAS jobs.	1. Please delete "Cache shall be dynamically managed for both Read and Write operations" because different OEMs have different architectures & justification for the same. For a PFS environment that is likely to grow, even the metadata storage (MDT) & object storage (OST) are recommended to be in separate storage systems (MDT would be a very low-cost device in such case). Clubbing the MDT, OST & NAS also in the same storage may not be a recommended architecture.	No clarification/No amendment required.

Section 4.27	Should have Single Graphic Use Interface (GUI) for both File and Block as well as command line interfacing. Must include real time performance monitoring tools giving information on CPU utilization, volume throughput, I/O rate and latency etc.		<p>Confusing. If the requirement is for NAS (File IO), there would not be a Block IO.</p> <p>However, it is suggested that the storage for NAS be separate from PFS storage & should support both block IO (SAN storage) & File IO (NAS storage) since the non-HPC / PFS environment would likely need support for block IO (SAN storage) to high-availability deployment for large nos. of applications.</p> <p>If NAS is separated, please specify the same as a storage supporting NAS & SAN. Also specify the usable disk capacity required for the 2nd storage</p>	NAS 200 TB, PFS 200TB
Section 4.3	Storage solution must be designed for aggregate performance of at least 5GBps from all nodes/controllers simultaneously. A Detailed benchmark report shall be submitted along for both layers with technical solution proposal on proposed Hardware. The same needs to be shown during acceptance.	Storage solution must be designed for aggregate performance of at least 5GBps from all nodes/controllers simultaneously. A Detailed benchmark report or a published performance whitepaper shall be submitted along for both layers with technical solution proposal on proposed Hardware. The same needs to be shown during acceptance.	<p>"Both layers" is not understood. PFS can be benchmarked only for the desired 5GBps. A matching testbed may not always be available to carry out a benchmark for the proposed solution. However, if the bidder submits a published benchmark with similar hardware, it would guarantee that during acceptance, the system will deliver or can be scaled up to deliver the specified 5GBps performance.</p>	No clarification/No amendment required.

Section 4.4	<p>Bidder to supply 200 TB usable capacity based storage space in single global namespace such that:</p> <p>1) Capacity Layer : 190 TB usable capacity on 12Gbps 7.2K RPM NL SAS disks with RAID 6 (8+2) or equivalent.</p> <p>2) Performance Layer: 10TB usable capacity on 1DWPD SSDs Flash with RAID 6 (8+2) or equivalent.</p> <p>3) Metadata Storage Space: Metadata capacity should be configured to accommodate minimum 2% of 200TB on 1DWPD SSDs in RAID1</p> <p>4) Parallel File system should be OEM supported Lustre or GPFS.</p>	<p>Bidder to supply 200 TB usable capacity based storage space in single global namespace such that:</p> <p>1) Capacity Layer : 190 TB usable capacity on 12Gbps 7.2K RPM NL SAS disks with RAID 6 (8+2) or equivalent.</p> <p>2) Performance Layer: 10TB usable capacity on 1DWPD SSDs Flash with RAID 6 (8+2) or equivalent.</p> <p>3) Metadata Storage Space: Metadata capacity should be configured to accommodate minimum 2% of 200TB on 1DWPD SSDs in RAID1</p> <p>4) Parallel File system should be open source Lustre or BeeGFS. Bidder should submit references of similar implementation and support for the proposed file system.</p>		Suitable corrigendum will be published.
Section 4.7	<p>Minimum 2 x Hi Speed 100Gbps (IB) Interconnect compatible with 200Gbps HDR IB network ports per controller.</p>	<p>Minimum 2 nos. 12Gbps SAS, 16Gbps FC or 100Gbps (IB) as per OEMs documented & published whitepaper or referenceable site. However, in any case, bidder to submit OEMs whitepaper documenting at least four-fold performance (i.e. 20Gbps) scalability using the same architecture</p>	<p>Infiniband will not be able to boost performance if the underlying controller cannot support such performance. And since PFS is a scale-out architecture, high-speed connectivity in any one controller will not be usable. Scale-out architecture is depicted in schematic below</p>	No clarification/No amendment required.

Section 4.8	<p>User, Group and directory level Quota Ability to transfer data from external storage to GPU- Direct-Storage functionality to move data from PFS to GPU memory bypassing CPU cache all the way to applications running inside docker containers. Such storage functionality must be supported by NVIDIA Magnum-IO library.</p> <p>Storage solution must support functionality to move most frequently accessed files automatically to higher performance flash tier based on policies and migrate least frequently accessed data to disk tier. Any additional servers, software or licenses required to meet this functionality must be quoted with the tender response.</p>	Delete	<p>These are SAN Storage features of a specific OEM. Many of these features defeat the purpose of PFS</p> <p>(Example: to move data from PFS to GPU memory bypassing CPU cache - this requirement is bypassing PFS itself because CPU cache is PFS OSS cache)</p>	No clarification/No amendment required.
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<p>Section 4.9, Page 28</p>	<p>Ability to transparently recover from client, server and network failures without losing data. Must support native Parallel filesystem client access to AI/ML/DL applications running inside docker container framework. OEM supported Lustre PFS or GPFS is to be provided.</p>	<p>Please advise if Lustre PFS / GPFS has to be or have commercial product / support or it can be open source product. An open source product does not have any OEM. So as named product GPFS is a commercial product, Lustre also has to be a commercial product. For GPFS, please allow host interfaces as per the best practice architecture of GPFS & not Infiniband since the performance required is specified.</p> <p>Dell: Delete OEM supported Lustre PFS or GPFS is to be provided.</p>		<p>Suitable corrigendum will be published.</p>
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Section 5.7, Page 32	IIT Jodhpur will provide a server room/Data Centre Space with two standard 42U rack (bidders can visit the site to see the space and racks). Precision Cooling Solution is already available with IIT Jodhpur considering the max 15KW of IT Load per Rack. Thus the Vendor needs to propose a solution in such a way that all IT Equipments required to be supplied as per the Tender along with the existing DGX		<p>CCS: Please consider the (Power) 25KW maximum IT load per rack because the consideration given by IITJ is less according to our consideration. So we request consider maximum 25 KW IT load per rack.</p> <p>Netweb: Since 2x DGX A100 units alone will require 13KW of power thus we request you to please allow provision to use up to 3 Racks for populating complete HPC Solution , instead of the limit of using only 2 Racks.</p>	Sufficient racks will be provided.
Section 6.2, Page 32	Resource Manager & Scheduler		Can we propose open source software for resource manager and scheduler. Please clarify	No clarification/No amendment required.
Section 6.5	Commercial Licensed Cluster Management S/W (License issued in the name of IIT JODHPUR)		Consider replacing "Commercial licensed cluster management software" with Open Source because if the OS in the compute nodes are open source (like CentOS) & PFS is open source like Lustre, the job scheduler can also be open source (like SLURM, OpenPBS etc.)	No clarification/No amendment required.
Section 6.7, Page 34	Intel Cluster Studio : Intel® Parallel Studio XE Cluster Edition for Linux*		Kindly advise how many concurrent users are needed	Suitable corrigendum will be published.

Section 7.5	All the installation needs to be done by OEM.	<p>We request that this clause be amended to "All the installation needs to be done by OEM or OEM certified Partner"</p> <p>Dell: Typically the bidding entity implements the HPC & PFS. The techno-commercial marketing criteria ensure only capable bidders are participating.</p>	<p>Netweb: In an HPC solution there are systems from Multiple OEMs even this requirement includes integration with DGX A100, thus all the installation by an OEM is not possible. Thus we request you to please amend this clause as "All the installation needs to be done by OEM/Authorized System Integrator of OEM",</p>	Suitable corrigendum will be published.
Section 8.1	Additional 2 years optional AMC price to be quoted.		Will you consider AMC quote for L1 evaluations? Will you release the AMC order along with the supply and deploy order upfront?	It will not consider in evaluation
Section 8.3.2 Bidder/OEM Evaluation Point No:-3 Page No.12	<p>Cumulative turnover of OEM in last three financial years from Hardware supply, maintenance and Support service activities of rack based HPC servers only in India.</p> <p>Year 2017-2018 Year 2018-2019 Year 2019-2020</p> <p>Supporting documentary evidence must be provided.</p>	<p>Cumulative turnover of OEM/Bidder in last three financial years shall be 35 Crore INR from Hardware supply, maintenance and Support service activities of rack based HPC servers only in India.</p> <p>Year 2017-2018 Year 2018-2019 Year 2019-2020</p> <p>Supporting documentary evidence must be provided.</p>		No clarification/No amendment required.

<p>Section 8.3.2 Bidder/OEM Evaluation Point No:-6 Page No.13</p>	<p>The OEM should have set up at least 3 or more number of HPCs in the country in last three years with minimum 3 clusters containing sustained speed of 50 Tera Flops (for CPU only) or more. Also Bidder must have supplied at least 1 number of PFS storage in country with 50TB or more capacity in last 3 years (FY 2017-18, FY 2018-19 and FY 2019-20). Purchase order copies with bidder installations reports to be submitted along with contact nos. of the person.</p>	<p>The OEM /Bidder should have set up at least 3 or more number of HPCs in the country in last three years with minimum 3 clusters containing sustained speed of 10 Tera Flops (for CPU only) or more. Also Bidder must have supplied at least 1 number of PFS storage in country with 10TB or more capacity in last 3 years (FY 2017-18, FY 2018-19 and FY 2019-20). Purchase order copies with bidder installations reports to be submitted along with contact nos. of the person.</p>		<p>No clarification/No amendment required.</p>
<p>Section 8.3.2</p>	<p>HPC OEM presence in Top500.org latest</p>	<p>Requesting you to kindly relax this point.</p>		<p>No clarification/No</p>
<p>Page 36</p>	<p>As per rfp Only manufacturer(s) or their sole authorized distributor / bidder are eligible to bid.</p>	<p>There is no such sole authorized distributor for any OEM. It will restrict other HPC partner for the same OEM to participate in the bidding process and competitive price cannot be evaluated. Therefore you are requested to change as “ Only manufacturer(s) or their authorized distributor / bidder are eligible to bid”.</p>	<p>Query 01: There is no Pre-Qualification Criteria</p>	<p>No clarification/No Suitable corrigendum will be published.</p>