

**ANNEXURE- A****Pre-Bid Responses for Tender No: CDACP/NSM-HPC-II/2019/263 dated 08/07/2019****RAAMAYA TECHNOLOGIES**

<b>Sl.No.</b>	<b>Section / Page No</b>	<b>Reference in tender</b>	<b>Query From Bidder</b>	<b>C-DAC Response</b>
1	Section II 4.8 Page no.8	The bidder must have minimum annual sales turnover of Rs. 10 Crores for each of last three financial years.	<p>The bidder must have minimum annual sales turnover of Rs. 4 Crores for each of last three financial years.</p> <p>We would sincerely request the department to kindly take into consideration local companies from within the state of Maharashtra which are registered with Ministry of Micro, Small and Medium Enterprises and have the required experience and credibility to cater to these requirements; but may not essentially have a turnover that the department insisted upon. We request the department to kindly reduce the turnover threshold to less than or equal to the anticipated procurement cost or alternatively give a leeway to companies registered with the MSME Department which is a standard practice followed in open tenders by various departments of State and Central Government departments.</p>	Refer corrigendum.
2	Section II 4.10 Page No.8	For Part-C: The bidder must have executed successfully at least one order of HPC Cluster in India having peak compute power of min. 50 TF and One PFS based Storage System in India having usable capacity of min. 50 TB of capacity.	<p>The bidder must have executed successfully at least one order of HPC Cluster/HCI Infrastructure in India having a value of minimum 5 Crore</p> <p>There are several small and medium sized companies who have experience similar to departments requirement like setting up of Hyper Converged Infrastructure (HCI). But lack in terms of specific work experience of HPC cluster. Hence, we request you to consider these changes to increase the participation.</p>	No Change

3	Section III 4 Page no.13	Performance Bank Guarantee (PBG): The successful bidder will be required to furnish the Performance Guarantee towards the supplies etc. supplied, in the form of a Bank Guarantee in INR equivalent to 10% amount of the total order value, as per the format attached to this document (Annexure– A).	The successful bidder will be required to furnish the Performance Guarantee towards the supplies etc. supplied, in the form of a Bank Guarantee/Fixed Deposit Receipt in INR equivalent to 10% amount of the total order value.  As per General Financial Rule 2017 Rule 171: Performance Security Subsection (i) states 'Performance Security may be furnished in the form of an Account Payee Demand Draft, Fixed Deposit Receipt from a Commercial bank, Bank Guarantee from a Commercial bank or online payment in an acceptable form safeguarding the purchaser's interest in all respects'. Hence request you to allow Performance Guarantee by way of Fixed Deposit.	No Change
<b>IBM</b>				
1	Section III Point 7.1 Page 14	Per Node Linpack Rmax performance of min. 70% of the theoretical peak value for the compute nodes in section A-1, C-1 and C-2	For A-1, there is no compute node, we request to remove A-1 from Linpack test	No Change
2	Section III Point 7.2 Page 15	2. Per Node Linpack Rmax performance of min. 55% of the theoretical peak value for GPU compute nodes mentioned in section A-2 & C-3	Linpack performance require to use IBM optimized environment for HPC for best performance. It will require to show onsite. In tender no software is mentioned, IBM will add HPC software stack in the HPC solution. We request CDAC to provide their input.	Bidder may run the benchmark using their HPC software stack for demonstration purpose.
3			CDAC has not mentioned any software for HPC stack. IBM request to include below software stack for HPC environment.	No Change.
4			xCAT for cluster management	
5			LSF HPC Suite for Workgroup (Job Scheduler, Spectrum MPI, Web Based Job Submission)	
6			ESSL and PESSL	
7			Parallel performance Tool Kit environment	
8			XLC and XL fortran	
9			RHEL for OS	
10	Section IV, A - 1 Page 19	Processor - 2 x IBM Power 9 Processor with min. 20-core and with min. 2.4Ghz frequency	Request to include 20 - core per socket  Processor - 2 x IBM Power 9 Processor with min. 20-core per socket and with min. 2.4Ghz frequency	Refer corrigendum

11	Section IV, A - 1 Page 19	HDD - Min. 2 x 2 TB SATA disk drive with Support for Hardware RAID 0, 1	System does not have hardware RAID, Request to allow software RAID.	Refer corrigendum
12	Section IV, A - 1 Page 20	OS Support - Fully certified/compatible with latest CentOS 7.x	IBM HPC software require RHEL for better support. Request to allow RHEL instead of CentOS. CentOS is compatible.  <a href="https://developer.ibm.com/linuxonpower/2018/08/17/announcing-centos-linux-7-power9/">https://developer.ibm.com/linuxonpower/2018/08/17/announcing-centos-linux-7-power9/</a>	No Change
13	Section IV, A - 1 Page 20	Remote Management - IPMI 2.0 or equivalent Support with KVM and Media over LAN features with additional licenses if any. Should have support for Redfish API or equivalent for server management.	Change to "Remote Management - IPMI 2.0 with remote KVM"  Latest update - Redfish API for OpenBMC as well for virtual media - work is going on. <a href="https://github.com/openbmc/openbmc/tree/master">https://github.com/openbmc/openbmc/tree/master</a>	Allowed
14	Section IV, A - 1 Page 20	Depth - Should not exceed 850mm	Change to "Depth - Should not exceed 851mm"	Allowed
15	Section IV, A - 2 Page 20	Processor - 2 x IBM Power 9 Processor with min. 20-core and with min. 2.4Ghz frequency	Request to include 20 core per socket with Nvlink  Processor - 2 x IBM Power 9 Processor with min. 20-core per socket with Nvlink and with min. 2.4Ghz frequency	Refer corrigendum
16	Section IV, A - 2 Page 20	OS Support - Fully certified/compatible with latest CentOS 7.x	IBM HPC software require RHEL for better support. Request to allow RHEL instead of CentOS. CentOS is compatible.  <a href="https://developer.ibm.com/linuxonpower/2018/08/17/announcing-centos-linux-7-power9/">https://developer.ibm.com/linuxonpower/2018/08/17/announcing-centos-linux-7-power9/</a>	No Change
17	Section IV, A - 2 Page 20	Remote Management - IPMI 2.0 or equivalent Support with KVM and Media over LAN features with additional licenses if any. Should have support for Redfish API or equivalent for server management.	Change to "Remote Management - IPMI 2.0 with remote KVM"  Latest update - Redfish API for OpenBMC as well for virtual media - work is going on. <a href="https://github.com/openbmc/openbmc/tree/master">https://github.com/openbmc/openbmc/tree/master</a>	Allowed
18	Section IV, A - 2 Page 20	Depth - Should not exceed 850mm	Change to "Depth - Should not exceed 851mm"	Allowed
19	Section IV, A - 2 Page 19	Network - Two 1GbE network ports with PXE boot capability	Change to "Network - Two 1GbE network ports "	Refer corrigendum

20	Page 22, PART B, Storage Benchmarks	PART B, Storage Benchmarks	<p>Benchmark: 1. Bidder must submit storage benchmark results along with bid and should demonstrate 4 GB/s write throughput after installation. 3. Benchmarks must be run on compute nodes where each node is writing to same-shared file as well as each node writing to separate unique file. Bidder must submit storage benchmark results along with tender response.</p> <p>We request that the submission of "benchmark results along with the bid/tender response" be waived off considering the magnitude of the requirement.</p> <p>We will share our performance commitment on the OEM Letterhead and demonstrate the throughput after installation.</p>	Refer corrigendum
21		2. Open-source IOR/IOZone benchmarks running on compute nodes with 1 MB block size and file size double than total storage cache and I/O node memory.	Please clarify if 1MB is the transfer size in IOR benchmark.	Yes. 1MB is the transfer size.
22	Page 27, PART C, Storage Benchmarks	PART C, Storage Benchmarks	<p>Benchmark: 1. Bidder must submit storage benchmark results along with bid and should demonstrate 4 GB/s write throughput after installation. 3. Benchmarks must be run on compute nodes where each node is writing to same-shared file as well as each node writing to separate unique file. Bidder must submit storage benchmark results along with tender response.</p> <p>We request that the submission of "benchmark results along with the bid/tender response" be waived off considering the magnitude of the requirement.</p> <p>We will share our performance commitment on the OEM Letterhead and demonstrate the throughput after installation.</p>	Refer corrigendum
23		2. Open-source IOR/IOZone benchmarks running on compute nodes with 1 MB block size and file size double than total storage cache and I/O node memory.	Please clarify if 1MB is the transfer size in IOR benchmark.	Yes. 1MB is the transfer size.
<b>NEC Technologies India Private Limited</b>				

1	Section II, General Conditions of Contract (GCC), Point no 4.9 and 4.10	<p><b>For Part-B:</b> The bidder must have installed and commissioned at least One PFS based Storage System in India having usable capacity of minimum 50 TB. The purchase order and installation certificates from the end user in the name of bidder to this effect must be submitted with the bid document. (Any prototype installation / test set-up or installation in bidder's or its affiliate premises will not be accepted).</p> <p><b>For Part-C:</b> The bidder must have executed successfully at least one order of HPC Cluster in India having peak compute power of min. 50 TF and One PFS based Storage System in India having usable capacity of min. 50 TB of capacity.</p>	If the bidder is a HPC system integrator in India authorized by principal manufacturer (OEM) of compute nodes, the bidder must have installed and commissioned at least one HPC system in India having peak compute power of 50 TF (OR) the bidder or the parent company of the bidder must have installed and commissioned at least one HPC system having peak compute power of minimum One Peta FLOP anywhere in the world.	No Change
<b>HPE</b>				
1	Page no. 24, Part C, Point no 2: compute nodes form factor	2U rack mountable or smaller form factor	Request to change to 2U or Better	Refer Corrigendum
2	Page no. 24, Part C, Point no 3: compute nodes with NVIDIA GPU: Processor	2 x AMD EPYC ROME processor with min. 32-core and with min. 2.5Ghz frequency having 16 DP flops / cycle for each core and native AVX2 support	Change it to 2.2Ghz or Better. Since the GPUs will not be supported with this high wattage CPU	Refer Corrigendum
3	Page 27, PART C, Storage Benchmarks	Bidder must submit storage benchmark results along with bid and should demonstrate 4 GB/s write throughput after installation.	kindly allow to commit instead of submit	Refer Corrigendum
<b>DDN</b>				
1	Section V: Price Bid, Page no:29, Sr. no: 5	Part B: Storage- 200 TiB	Part B: Storage- 200 TiB	Please read as 'Part B : Storage - 200 TiB for Part A'
2	Section V: Price Bid, Page no:30, Sr. no: 9	Any other component, items required to complete the total HPC cluster and storage		Please include the prices for Storage solution of Part C in sr. No 9.