Purchase Section
Ref.No.5495/180221/1772/EQPT
5th September, 2022

Sub: Minutes of Pre Bid Conference held on 05.09.2022 for purchase of NAS

As per Clause No.1.6.2 Chapter I – Instruction to Bidders of Tender Enquiry dated 25.08.2022, the Pre Bid Conference was held on 05.09.2022 at 11:00AM.

The following attended from CCMB

Dr. R Sankaranarayanan	-	Chairman
Dr.Anant B Patel	-	Member
Dr. Swasti Raychaudhuri	-	Member
Dr. P Chandra Shekar	-	Member
Ms. Asha Ramesh	-	Member
Dr. B Raman	-	Member
Dr. Divya Tej, Scientist	-	IO/Member
Ms. Geetha Thanu, Head, IT	-	Member – Co-Opted
Shri Ram Kumar for COA	-	Member
COFA	-	Member
Sr.COSP	-	Member

From Vendors' side, the following have attended:

1. M/s. Softiron, Hyderabad
2. M/s. Akshara Enterprises, Hyderabad
3. M/s. Dell India, Hyderabad
4. M/s. Variman Global Enterprises, Hyderabad
5. M/s. Hewlett Packard Enterprise, Hyderabad
6. M/s. Locuz Enterprises Solutions Limited, Hyderabad

e-mails also received from following venders seeking clarifications.

1. M/s Concept Information Technologies, Pune
2. M/s Acceleron labs, Bangalore
3. M/s Gowra Bits & Bytes, Hyderabad

During the Pre-Bid Conference, Clarifications / CCMB's responses, in respect of all queries received from all the firms were given.

Responses/clarifications given are stated in the Annexure enclosed.

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Sr.CoSP)
Convenor

(Dr.Divya Tej)
Member

CoFA
Member

AO
Member

(Dr. B Raman)
Member

(Dr. P Chandra Sekhar)
Member

(Dr. A B Patel)
Member

(Ms.Asha Ramesh)
Member

(Dr. Swasti Raychaudhuri)
Member

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(Ms.Geetha Thanu)
Member Co-Opted

(Dr. R Sankaranarayanan)
Chairperson

Annexure to Pre-Bid Minutes

Tender No: 5495/180221/ 1722/EQPT

Supply and Installation of Network Attached Storage (NAS) – 2 PB
(Usable scale out NAS - 1 No.)

Technical Clarifications				
S.No	**Company Name**	**CCMB Tender specs**	**Clarification asked / modification required by the Company**	**CCMB Clarifications**
1.	**M/s AeroSpace/ Softiron**	The storage OEM should be in latest 2021 Gartner Leader Quadrant report.	Ability to bid- as not member of Gartner Leader Quadrant	Not as per tender specifications.
		Answers to the Questions asked: 1. What is the operational (application) use-case requiring 7 GB/s throughput based on 32KB block size? Ans: Application - Genome Sequencing applications. Block size – data file size is huge. 2. Is 32KB block size a constant, or are there larger block size operations expected? Ans: Higher acceptable – already specified in the specification. 3. Are the datasets structured or unstructured data (e.g. databases, etc.) Ans: Unstructured. 4. What is percentage of write to read? Ans: Equal			
2.	**M/s Dell**	The storage OEM should be in latest 2021 Gartner Leader Quadrant report.	"The storage software OEM should be in leaders quadrant in latest 2021 report, Gartner Magic Quadrant for Distributed file systems"	**Typo Error- corrected to:** Storage system OEM should be in the **Leaders Quadrant in the latest Gartner 2021 report.**
		Minimum 6 or higher storage controllers /Nodes with no single point failure and should allow modular scalability adding disks and enclosures whenever required.	"Minimum 6 or higher storage controllers/ Nodes with no single point failure and should allow modular scalability by adding disks or nodes/controllers". Should be scalable to	**Modified enclosures to nodes or controllers:** Minimum 6 or higher storage controllers/Nodes with no single point failure

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			5x the number of provided storage controllers/nodes.	and should allow modular scalability adding disks **or nodes or controllers** whenever required. **Added to original specs:** **Storage space should be scalable to minimum 5 PB usable.**
		Each storage controller should have minimum dual 1 Gbps Ethernet ports and minimum dual 10 Gbps SFP+ ports with required modules for connecting to core switch.	"Each storage controller should have minimum dual 10 Gbps SFP+ ports or faster with required modules for connecting to core switch.	**Modified dual1 Gbps to one 1 Gbps ports:** Each storage controller should have minimum **one** 1 Gbps Ethernet ports and minimum dual 10 Gbps SFP+ ports with required modules for connecting to core switch.
		30:2 (Minimum thirty disks two spare should be provided or better)	"30:2 (Minimum thirty disks two spare should be provided or better). Hot spare can be physical or virtual"	Hot spare can be physical or virtual.
		Minimum 7 GBps throughput (in minimum 32KB block size) or higher across the usable 2 PB proposed storage system with multiple files simultaneous access.	"Minimum 5 GBps throughput (in minimum 32KB block size) or higher across the usable 2 PB proposed storage system with multiple files simultaneous access."	7 GBps CCMB requirement. Storage will be used for archival and computations. Minimum 32KB and higher is acceptable.
		Storage must offer fast rebuild capability for replacing failed drives. Rebuilding 4TB or higher capacity drive should be less thana 24 hours or better when system is live.	To remove the clause.	CCMB's requirement and hence can not be removed.
		As rack space is available, required racks for storage need not be quoted.	Bidder should be allowed to supply OEM rack along with storage.	No space and no external AC, power, etc. available in the data centre. Have to be fixed

				in existing rack(smart rack) having following dimension. **42U*800*1200 - 3 Nos** **42U*600*1200 – 1 No**
		Not available	The system must support Role Base Access Control with Integration with Active Directory and LDAP	Not essential, as the number of users are limited. Any additional feature acceptable.
		2 PB usable capacity using NL-SAS/SATA3 Enterprise grade hard disks or higher to be implemented in dual parity/RAID 6 (8+2) or better with a protection level of 2-drive or better failure on complete storage solution. Hot spare should be configured as per industry best practices.	We request this to be changed to : 2 PB usable capacity using NL-SAS/SATA/SATA3 Enterprise grade hard disks or higher to be implemented in dual parity/RAID 6 (8+2) or better with a protection level of 2-drive or better failure on complete storage solution.	No change
3.	**M/s Locuz Enterprise**	Minimum 6 or higher storage controllers/Nodes with no single point failure and should allow modular scalability adding disks and enclosures whenever required.	Minimum 6 or higher storage controllers/Nodes with no single point failure and should allow modular scalability adding disks and enclosures whenever required. Modular scalability adding disks and enclosures not applicable for node based architecture.	**Modified enclosures to nodes or controllers: (same as M/s Dell query)** Minimum 6 or higher storage controllers/Nodes with no single point failure and should allow modular scalabiiity adding disks **or nodes or controllers** whenever required.
		30:2 (Minimum thirty disks two spare should be provided or better)	For Scale-out architecture we need to mention number of drive failures across the cluster.	Anything better acceptable.
		The storage should provide full NFS, CIFS, SMB, HDFS, HTTP protocol support for connecting from	The storage should provide full NFS, CIFS, SMB protocol support for connecting from Linux and Windows environment. All	**Modified:** The storage should provide **minimum protocols - NFS, CIFS, SMB** support for

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		Linux and Windows environment. All necessary licenses etc. be included for the same.	necessary licenses etc. be included for the same.	connecting from Linux and Windows environment. All necessary licenses etc. be included for the same.
		Performance to be demonstrated for NFS and CIFS access using standard tool like IOR/IOZone	Performance to be demonstrated for NFS and CIFS access using standard tool like IOR/IOZone/FIO	**Added to original specs:** Performance to be demonstrated for NFS and CIFS access using standard tool like IOR/IOZone **or equivalent tools.**
4.	**M/s Concept Information Technologies**	2 PB usable capacity using NL-SAS/SATA3 Enterprise grade hard disks or higher to be implemented in dual parity/RAID 6 (8+2) or better with a protection level of 2-drive or better failure on complete storage solution. Hot spare should be configured as per industry best practices.	2 PB usable capacity using NL-SAS/SATA3 Enterprise grade hard disks or higher should be offer with minimum dual drive failure protection or better protection for better resiliency and performance. Hot spare drive should be configured as per industry best practices."	No redundant storage available. (8+2) required to overcome multiple disk failure at same time.
		Minimum 6 or higher storage controllers/Nodes with no single point failure and should allow modular scalability adding disks and enclosures whenever required.	Storage system must be offered in a No-Single-Point of Failure offering up to six 9s of availability with minimum 2 Nodes/Controllers and Scale-Out to minimum 6 number Nodes/Controllers. Modular scalability by adding Nodes/Controllers, enclosures and drives whenever required."	Minimum 6 controllers / Nodes required as storage capacity is high.
		In addition, each controller/node should have	" In addition, each storage should have minimum 800GB or	It is minimum 800 GB and anything higher or

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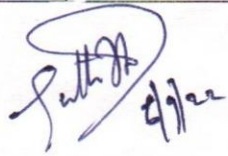
		minimum 800 GB of SSD based cache for frequently access data.	higher of SSD/NVMe based flash cache for frequently access data."	higher performance is acceptable.
5.	**M/s Acceleron labs**	The storage OEM should be in latest 2021 Gartner Leader Quadrant report.	Please remove this condition as no Made In India (MII) company has representation in Gardner Magic Square. Also this one is a restrictive condition on MII companies.	CCMB's requirement and hence can not be removed.
6.	**M/s Gowra Bits & Bytes**	The storage OEM should be in latest 2021 Gartner Leader Quadrant report.	"The storage software OEM should be in leaders quadrant in latest 2021 report, Gartner Magic Quadrant for Distributed file systems"	**Typo Error- corrected to:** Storage system OEM should be in the **Leaders Quadrant in the latest Gartner 2021 report.**
		Minimum 6 or higher storage controllers/Nodes with no single point failure and should allow modular scalability adding disks and enclosures whenever required.	"Minimum 6 or higher storage controllers/Nodes with no single point failure and should allow modular scalability by adding disks or nodes/controllers". Should be scalable to 5x the number of provided storage controllers/nodes.	**Modified enclosures to nodes or controllers:** Minimum 6 or higher storage controllers/Nodes with no single point failure and should allow modular scalability adding disks **or nodes or controllers** whenever required. **Added to original specs:** **Storage space be should be scalable to minimum 5 PB usable.**
		Each storage controller should have minimum dual 1 Gbps Ethernet ports and minimum dual 10 Gbps SFP+ ports with required modules for connecting to core switch.	"Each storage controller should have minimum dual 10 Gbps SFP+ ports or faster with required modules for connecting to core switch.	**Modified dual1 Gbps to one 1 Gbps ports:** Each storage controller should have minimum one 1 Gbps Ethernet ports and minimum dual 10 Gbps SFP+ ports with required modules for connecting to core switch.



		30:2 (Minimum thirty disks two spare should be provided or better)	"30:2 (Minimum thirty disks two spare should be provided or better). Hot spare can be physical or virtual"	Hot spare can be physical or virtual.
		Minimum 7 GBps throughput (in minimum 32KB block size) or higher across the usable 2 PB proposed storage system with multiple files simultaneous access.	"Minimum 5 GBps throughput (in minimum 32KB block size) or higher across the usable 2 PB proposed storage system with multiple files simultaneous access."	7 GBps CCMB requirement. Storage will be used for archival and computations. Minimum 32KB and higher is acceptable.
		Storage must offer fast rebuild capability for replacing failed drives. Rebuilding 4TB or higher capacity drive should be less thana 24 hours or better when system is live.	To remove the clause.	CCMB's requirement and hence cannot be removed.
		As rack space is available, required racks for storage need not be quoted.	Bidder should be allowed to supply OEM rack along with storage.	No space and no external AC, power, etc. available in the data centre. Have to be fixed in existing rack(smart rack) having following dimension. **42U*800*1200 - 3 Nos** **42U*600*1200 – 1 No**
		Not available	The system must support Role Base Access Control with Integration with Active Directory and LDAP	Not essential, as the number of users are limited. Any additional feature acceptable.
7.	**M/s Akshara Enterprises**	2 PB usable capacity using NL-SAS/SATA3 Enterprise grade hard disks or higher to be implemented in dual parity/RAID 6 (8+2) or better with a protection level of 2-drive or better failure on complete storage	2 PB usable capacity using NL-SAS/SATA3 Enterprise grade hard disks or higher should be offer with minimum dual drive failure protection or better protection for better resiliency and performance. Hot spare drive should be	.

		solution. Hot spare should be configured as per industry best practices.	configured as per industry best practices."	
		Minimum 6 or higher storage controllers/Nodes with no single point failure and should allow modular scalability adding disks and enclosures whenever required.	Storage system must be offered in a No-Single-Point of Failure offering up to six 9s of availability with minimum 2 Nodes/Controllers and Scale-Out to minimum 6 number Nodes/Controllers. Modular scalability by adding Nodes/Controllers, enclosures and drives whenever required."	Minimum 6 controllers / Nodes required as storage capacity is high.
		In addition, each controller/node should have minimum 800 GB of SSD based cache for frequently access data.	" In addition, each storage should have minimum 800GB or higher of SSD/NVMe based flash cache for frequently access data."	It is minimum 800 GB and anything higher or higher performance is acceptable.

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Commercial clarifications				
S.No	**Company Name**	**CCMB Tender specs**	**Clarification asked by the company**	**CCMB Clarifications.**
1.	M/s Akshara Enterprises	Page 65 Clause 6 GCC 2.16.3 Delivery: Delivery period: 60 days from the date of Purchase Order	Request you to kindly change the Delivery period to 12-14 weeks as the manufacturing process is not in full capacity due to Covid Guidelines.	**Modified delivery period to 90 days:** Delivery period: **90** days from the date of Purchase Order
2.	M/s Dell		Will this be a reverse auction bid?	Yes
			Applicability of Make in India-since it is global tender. We	Make in India Clause will be applicable for giving purchase preference, as

			understand the product proposed need not be make in India product.	per MII Policy dated 16.9.2020. The product purchased need not be manufactured in India, since this is Global Tender
			Can one OEM bid with multiple partners or single partner only.	Please refer to Chapter – VI, Note for bidders (c) – Page No. 80/81 of Tender Document.