DIRECTORATE GENERAL OF HYDROCARBONS
(Ministry of Petroleum & Natural Gas, Government of India)

Corrigendum no. 1 against tender no. GEM/2024/B/5576141 for "Comprehensive IT solution for centralized data storage and data security"

In respect of tender no. GEM/2024/B/5576141 for "Comprehensive IT solution for centralized data storage and data security", amendments to tender clauses and replies of pre-bid queries raised by the bidders, are attached herewith.

The bid closing/opening date has been extended as under:

	In lieu of	Revised
Bid Closing Date	29.11.2024 (15:00)	10.12.2024 (15:00)
Bid Opening Date	29.11.2024 (15:30)	10.12.2024 (15:30)

Addendum/ Corrigendum / Bid Due Date Extensions, if any, to the Bid Document shall be uploaded on DGH's website www.dghindia.gov.in and National e-Procurement Portal http://gem.gov.in. Hence, bidders are advised to visit the said websites regularly.

A	Amendments to Tender Clauses		
Sl no.	Tender References	Tender Clause Description	Amended Clause/New Clause
1	**[SCOPE OF WORK/TECHNICAL SPECIFICATIONS, Pg#1]** - *Primary Scale-Out Network Attached Storage* Point#2 "Capacity & Scalability"	- Storage shall be supplied with 100 TiB of usable NVMe-SSD capacity which should be available at user level after the provisioning of RAID-6 or equivalent data protection - Storage shall be scalable to 200 TiB of usable capacity in the same single unified addressable name space after the provisioning of RAID-6 or equivalent data protection.	- Storage shall be supplied with 100 TiB of usable NVMe-SSD capacity which should be available at user level after the provisioning of RAID-6 or equivalent data protection ensuring concurrent failure of at-least 4 disks - Storage shall be scalable to 200 TiB of usable capacity in the same single unified addressable name space after the provisioning of RAID-6 or equivalent data protection ensuring concurrent failure of at-least 4 disks.
2	**[SCOPE OF WORK/TECHNICAL SPECIFICATIONS, Pg#2]** - *Primary Scale-Out Network Attached Storage* Point#3 "Controllers"	- Storage must have a multi-controller Architecture and should be offered with minimum 2 controllers in active-active configuration with No Single Point of Failure architecture. - Storage must have mechanisms to ensure writes in the cache are protected in the event of power outage ensuring data consistency and completeness.	- Storage must have a multi-controller Architecture and should be offered with minimum 2 controllers in active-active configuration with No Single Point of Failure architecture. - Storage should be configured with minimum 256GB Cache/Memory (DRAM). - Storage must have mechanisms to ensure writes in the cache are protected in the event of power outage ensuring data consistency and completeness.
3	**[SCOPE OF WORK/TECHNICAL SPECIFICATIONS, Pg#2]** - *Primary Scale-Out Network Attached Storage* Point#6 "Protocol Support"	- Storage should be bundled with NFS (versions 2/3/4 or above), CIFS (SMB), protocols to support heterogeneous application environments. - FC, iSCSI protocols should also be supported either natively or as part of the solution.	- Storage should be bundled with NFS (versions 2/3/4 or above), CIFS (SMB), protocols to support heterogeneous application environments.
4	**[SCOPE OF WORK/TECHNICAL SPECIFICATIONS, Pg#2]** - *Primary Scale-Out Network Attached Storage* Point#7 "Resiliency and High Availability"	- The offered solution should be fully protected against any failure of disks, storage nodes/Controller, power supplies & network ports, to ensure that there is no Single Point of Failure (SPOF). - Storage should support non-disruptive maintenance and upgrades.	- The offered solution should be fully protected against any failure of disks, storage nodes/Controller, power supplies & network ports, to ensure that there is no Single Point of Failure (SPOF). - The offered solution should be configured in High Availability mode providing Six 9's of availability (99.9999%). - Storage should support non-disruptive maintenance and upgrades. - Vendor shall ensure that concurrent failure of at-least 4 disks can be handled within the storage without any kind of downtime.

A	Amendments to Tender Clauses		
Sl no.	Tender References	Tender Clause Description	Amended Clause/New Clause
5	**[SCOPE OF WORK/TECHNICAL SPECIFICATIONS, Pg#2]** - *Primary Scale-Out Network Attached Storage* Point#9 "Data Security"	- Offered Storage must support data encryption in-line with industry standards. - The storage system should be offered with the capability to identify and remediate ransomware attacks and protect and recover data from any such attacks. - The storage solution must be offered with snapshot functionality to capture point-in-time copies of data along with suitable mechanisms to protect them from malicious modifications.	- Offered Storage must support data encryption in-line with industry standards. - The storage solution must be offered with snapshot functionality to capture point-in-time copies of data along with suitable mechanisms to protect them from malicious modifications. - Should allow simultaneous access to the same file/data using different protocols like NFS, CIFS etc. for data sharing between multiple hosts.
6	**[SCOPE OF WORK/TECHNICAL SPECIFICATIONS, Pg#2]** - *Primary Scale-Out Network Attached Storage* Point#12 "Throughput"	- Offered Product must deliver sustained throughput of 2.5 GBPS (Giga Bytes Per Second) with 30% Sequential write and 70% Sequential Read operation and maximum block size of 128KB. - Bidder needs to demonstrate this performance using IOR / IO Zone / IOmeter /fio as part of User Acceptance test. - The performance must be demonstrated with data at rest encryption feature switched on.	- Offered Product must deliver sustained throughput of 10 GBPS (Giga Bytes Per Second) with 30% Sequential write and 70% Sequential Read operation and maximum block size of 128KB. - Bidder needs to demonstrate this performance using IOR / IO Zone / IOmeter /fio as part of User Acceptance test. - The performance must be demonstrated with data at rest encryption feature switched on.
7	**[SCOPE OF WORK/TECHNICAL SPECIFICATIONS, Pg#2]** - *Primary Scale-Out Network Attached Storage* "Quota Management"	New Addition	- Offered storage system must support User, User Group & directory quota. - Quota Management must support both Soft & Hard quota. Writes shall be disabled after reaching the hard limit of the assigned quota.
8	**[SCOPE OF WORK/TECHNICAL SPECIFICATIONS, Pg#2]** - *Backup Solution* Point#1	The solution should be proposed with 50TB capacity on appliance along with upfront backup software capacity license for 50TB.	The solution should be proposed with 50TB capacity on appliance/disk-based backup device along with upfront backup software capacity license for 50TB.
9	**[SCOPE OF WORK/TECHNICAL SPECIFICATIONS, Pg#2]** - *Backup Solution* Point#2	Proposed backup appliance should support industry leading backup software and should support deduplication at backup server/ host / application level.	Proposed backup appliance/disk-based backup device should support industry leading backup software and should support deduplication at backup server/ host / application level.

A	Amendments to Tender Clauses		
Sl no.	Tender References	Tender Clause Description	Amended Clause/New Clause
10	**[SCOPE OF WORK/TECHNICAL SPECIFICATIONS, Pg#2]** - *Backup Solution* Point#3	Offered disk-based backup device/appliance must support encryption functionality.	- Offered disk-based backup device/appliance must support encryption functionality. - Offered backup solution must be provided with functionality for Ransomware Protection.
11	**[SCOPE OF WORK/TECHNICAL SPECIFICATIONS, Pg#3]** - *DLP Solution* Point#15	Solution should be able to implement temporary policies for uplifting the user privileges for a defined duration	**Clause Deleted**
12	**[SCOPE OF WORK/TECHNICAL SPECIFICATIONS, Pg#4]** - *Deliverables*	New Addition	5. Server(s) (if required to make the solution completely operational) with suitable configurations necessary for installation of Backup Software & DLP Software must be provided by the bidder and the same has to be factored in while submitting the price bid. The warranty & AMC terms for these Server(s) shall be as per the terms specified under **E. Warranty and AMC**
13	**[SCOPE OF WORK/TECHNICAL SPECIFICATIONS, Pg#5]** - *Phase 3: DLP Solution Deployment* Bullet Point 1	Install and configure DLP solution on individual end-user desktops	Install and configure DLP solution on individual end-user desktops and the administration/management software on server.
14	**[SCOPE OF WORK/TECHNICAL SPECIFICATIONS, Pg#7]** - *Delivery & Installation Schedule Timelines* Point#1 "Supply of the all hardware and software components"	Within 4 weeks from the issuance of LoA	Within 6 weeks from the date of issuance of LoA
15	**[SCOPE OF WORK/TECHNICAL SPECIFICATIONS, Pg#8]** - *Delivery & Installation Schedule Timelines* Para#2	2. The implementation of the complete solution [*Refer to Sno #3 in Delivery & Installation Schedule above*] at DGH must be completed in totality within period of 10 weeks from the date of acceptance of letter of award / purchase order.	2. The implementation of the complete solution [*Refer to Sno #3 in Delivery & Installation Schedule above*] at DGH must be completed in totality within period of 12 weeks from the date of acceptance of letter of award / purchase order.

A	Amendments to Tender Clauses		
Sl no.	**Tender References**	**Tender Clause Description**	**Amended Clause/New Clause**
16	**[BID EVALUATION CRITERIA, Pg#1]** - *Technical rejection criteria* Para#2.2 "Eligibility and experience of the bidder"	Bidder, during the last five years, must have successfully carried out and completed either three similar work of value Rs 1,50,00,000 each or two similar work of value Rs 2,50,00,000 each or one similar work of value Rs 3,50,00,000. Documentary evidences like service contracts/ purchase orders / equivalent documents showing operations of such jobs along with completion Certificate(s) or payment certificates or any other documents which substantiate completion of the jobs, issued by the client(s) with contact details of the issuing person/organization (e-mail address, Phone Number, Fax number etc.) must be submitted along with the bid. **"Similar Work" should be construed as supply, installation & commissioning of Scale- Out Network Attached Storage or Data Loss Prevention (DLP) Solution.**	Bidder, during the last five years, must have successfully carried out and completed either three similar work of value Rs 1,50,00,000 each or two similar work of value Rs 2,50,00,000 each or one similar work of value Rs 3,50,00,000. Documentary evidences like service contracts/ purchase orders / equivalent documents showing operations of such jobs along with completion Certificate(s) or payment certificates or any other documents which substantiate completion of the jobs, issued by the client(s) with contact details of the issuing person/organization (e-mail address, Phone Number, Fax number etc.) must be submitted along with the bid. **"Similar Work" should be construed as supply, installation & commissioning of Scale- Out Network Attached Storage/SAN/Unified Storage or Data Loss Prevention (DLP) Solution.**
17	**[PRICE SCHEDULE, Pg#1]** - Note	**Note:** a. Quote against Item *"Installation & Commissioning"* must include cost of any hardware/software/component not explicitly mentioned, but are required to make the system fully functional b. Bidder is required to factor in cost suitably towards training to be imparted as per scope of work.	**Note:** a. Quote against Item *"Installation & Commissioning"* must include cost of any hardware/software/component not explicitly mentioned but are required to make the system fully functional. b. Bidder is required to factor in cost suitably towards training to be imparted as per scope of work. c. The price quoted against Sl.no. 1.05 (AMC Charges (for 4th & 5th Year)) should be at least 15% of the price quoted against Sl.no. 1.01 above. In case, it is found that the price quoted by bidder for Sl no 1.05 is less than 15% of the price quoted for Sl. no. 1.01, an amount of 15% would be deemed as AMC Charges (for 4th & 5th Year) against Sl no. 1.05, for the purpose of evaluation and payments. The price quoted for Sl. no. 1.01 shall subsequently be adjusted, without changing the Total bid cost offered by the bidder, for the purpose of evaluation and making payments.

#Note:
- Bidders are advised to read the entire bid document carefully, including the amended clauses, before responding to RFP.
- All other terms and conditions of the RFP shall remain unchanged.

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B	Response to Pre-bid Queries received from prospective bidders		
S No	Query/ Comments from the bidder	Additional Remarks	DGH Comments
1.	*Primary Scale-Out Network Attached Storage* Point#3 "Controllers" - Storage must have a multi-controller Architecture and should be offered with minimum 2 controllers in active-active configuration with No Single Point of Failure architecture. Storage should be configured with more than 256GB DRAM based cache. Cache should be globally coherent in nature so that data in cache of any controller is available for use to any of the other controllers. - Storage must have mechanisms to ensure writes in the cache are protected in the event of power outage ensuring data consistency and completeness.	Request a minimum amount of cache also be asked for, since capability of storage is directly related to cache. Hence request the clause to be changed as requested	**Clause Amended.** Refer to Sl.no. #2 at A. Amendments above
2.	*Primary Scale-Out Network Attached Storage* Point#9 "Data Security" - Offered Storage must support data encryption in-line with industry standards. - The storage system should be offer integration capability with third party antivirus and anti-ransomware software to provide the capability to identify and remediate ransomware attacks and protect and recover data from any such attack - The storage solution must be offered with snapshot functionality to capture point-in-time copies of data along with suitable mechanisms to protect them from malicious modifications.	Ransomware protection is the domain of third party softwares and the only file storage OEM who does it natively in the storage is Netapp. Hence please change this clause as requested to allow for wider participation	**Clause Amended.** Refer to Sl.no. #5 at A. Amendments above
3.	*Primary Scale-Out Network Attached Storage* Point#12 "Throughput" - Offered Product must deliver sustained throughput of 15 GBPS (Giga Bytes Per Second) with 30% Sequential write and 70% Sequential Read operation and maximum block size of 128KB. - Bidder needs to demonstrate this performance using IOR / IO Zone / IOmeter /fio/VDbench as part of User Acceptance test.	2.5GBps performance is too low for NVMe storage systems and can be achieved by hybrid (storages with spinning media). Either please increase the performance ask to 15GBps with 30% Sequential write and 70% Sequential Read operation. Or please allow storage vendor to use any disk type (not limited to NVME) to reach the asked capacity and performance number. Also data at rest is not asked in the spec, hence please remove it from this clause. Also data at rest is not asked in the spec, hence please remove it from this clause.	**Clause Amended.** Refer to Sl.no. #6 at A. Amendments above

B	Response to Pre-bid Queries received from prospective bidders		
S No	Query/ Comments from the bidder	Additional Remarks	DGH Comments
		Assuming NVMe drives are needed, request spec to be changed	
4.	*Delivery & Installation Schedule Timelines* Point#1 "Supply of the all hardware and software components" We request for corrigendum as " Supply of the all hardware and software components-Timeline-Within 12 weeks from the issuance of LoA		**Clause Amended.** Refer to Sl.no. #14 at A. Amendments above
5.	*Delivery & Installation Schedule Timelines* Point#3 "Supply of the all hardware and software components" We request for corrigendum as " Successful completion of installation, commissioning, configuration, and training as per the "Deployment Guidelines" and "Training" followed by 1 week of system stabilisation and monitoring period post installation. Timeline- Within 12 weeks from the supply of the all hardware and software components and acceptance of delivery by DGH		**No Change** To be guided by existing para under "Delivery & Installation Schedule Timelines"
6.	*Backup Solution* 1. Out of the 50TB capacity, how much would be structured data and how much Unstructured to rationalize workload requirements? Would 20:80 ratio for be safe to assume for Structured: Unstructured? 2. Request you to amend the word "appliance" to "appliance / disk-based backup device"		**1.** Data is User generated data which is mostly unstructured **2. Clause Amended.** Refer to Sl.no. #8 at A. Amendments above
7.	*Backup Solution* "New Addition Suggested" To protect the backup server from the ransomware or any malware attacks the proposed backup software master server must be installable on Linux as well as Windows platform. Backup Software must provide native Ransomware protection without the need of additional software or hardware.	Cyberattacks are rampant, sophisticated and AI driven these days and affect the backup environments first so that the backup (which was supposed to be last line of defence) is crippled. If Ransomware protection is not enabled on backup infra, then you are always mercy of AI driven cyber terrorists.	**Clause Amended.** Refer to Sl.no. #10 at A. Amendments above

B	Response to Pre-bid Queries received from prospective bidders		
S No	Query/ Comments from the bidder	Additional Remarks	DGH Comments
8.	*Backup Solution* "New Addition Suggested" Backup Software License must provide centralized management for management of all backup and archival.	When you do backup and archival of data, lot of vendors either do not have archival functionality, even if they have, they manage through fractured script-based solutions, which is unwanted and risky and makes manageability difficult	**Not Agreed**
9.	*Backup Solution* "New Addition Suggested" The backup software solution shall provide a single management interface for backup and archive for the complete environment supporting Virtual Machines, Physical Servers and End-Devices	A common GUI for all data stores be that in VM's or physical machines or end points makes manageability of entire backup environment easy	**Not Agreed**
10.	*Backup Solution* "New Addition Suggested" Backup software shall provide de-duplication to support any storage system, cloud repository and object storage as de-duplicated disk target and should work with various hardware OEMs to provide functionality like deduplication, compression, encryption, BMR, replication, DB backup etc.	De-duplication of data at source and Compression functionalities offered by backup vendors are very basic functionalities of Data centers these days. This reduces the needs for large capacity backup storages / target device, thus making recovery faster	**Not Agreed**
11.	*Backup Solution* "New Addition Suggested" Backup software must integrate with different hypervisor managers to backup different platforms including Hyper-V, VMware, RHEV, Oracle Virtual machine, OpenStack and offering cross hypervisor conversion.	Most of the DC environments today have one Hypervisor and tomorrow you may another. Backup software should have the capacity to integrate with all hypervisors available today, open and paid both.	**Not Agreed**
12.	*Backup Solution* "New Addition Suggested" Backup Software licenses must be perpetual in nature to ensure continuity of basic backup functionality even after the end of support period	If Subscription license is purchased, when the subscription period ends, even the basic functionality of backup let alone recovery. So perpetual license is always recommended for Govt organisations who have tendering process of procurement	**Not Agreed**

B	Response to Pre-bid Queries received from prospective bidders		
S No	Query/ Comments from the bidder	Additional Remarks	DGH Comments
13.	*Backup Solution* "New Addition Suggested" Backup Software vendor should be among leaders in Gartners Magic Quadrant for Backup Software	Trust only dependable and reputed backup vendor who has market standing and not by some startup with minimal and fractured functionalities.	**Not Agreed**
14.	*Primary Scale-Out Network Attached Storage* Point#1 "Architecture" Offered product should be disaggregated Scale-Out file storage supporting NFS and SMB natively. - Offered product should have specialized Operating System optimized and tuned for serving data efficiently in scale-out architecture. - Offered Storage platform must be configured to 100% usable capacity on NVMe SSDs with maximum disk size of 15.36TB NVMe TLC Drives.		**No Change** To be guided by existing Technical specifications for "Primary Scale-Out Network Attached Storage"
15.	*Primary Scale-Out Network Attached Storage* Point#2 "Capacity & Scalability" shall be configured with 100 TiB of Usable capacity using max 15.36TB TLC NVMe Drives. - Storage shall be scalable to Exabyte of Usable capacity in the same single unified addressable name space. Storage system should be offered with required back-end switches and 100Gbps connectivity so that scalability should be done by just adding Controllers and Disk Enclosures in a disaggregated manner. Vendor shall ensure that concurrent failure of at-least 4 disks can be handled without any kind of downtime and vendor shall configure the erasure code accordingly.		**Clause Amended.** Refer to Sl.no. #1 at A. Amendments above
16.	*Primary Scale-Out Network Attached Storage* Point#12 "Controllers" Storage should be multi-controller Architecture should be offered with minimum 2 controllers scalable to at least 8 Controllers in disaggregated to configured in active-active shared everything architecture configuration with No Single Point of Failure allowing independent scale of Controller and capacity eliminated east-west traffic to avoid delay in response and I/Os can be distributed evenly among all Controllers without causing		**Clause Amended.** Refer to Sl.no. #2 at A. Amendments above

B	Response to Pre-bid Queries received from prospective bidders		
S No	Query/ Comments from the bidder	Additional Remarks	DGH Comments
	contention. - Storage system should have more than 512 GB Memory		
17.	*Primary Scale-Out Network Attached Storage* Point#4 "WORM Support" 1. Storage shall include immutable snapshots capability with required licenses for protecting snapshot from modification or deletion until a specified retention date. it shall not be possible to reduce the expiration time. 2. However, if the business need arise, then expiration period shall be shortened only through Dual authorization and through different set of authorized users only. The requested functionalities must be configurable from the GUI/Web Interface for the administrators.		**No Change** To be guided by existing Technical specifications for "Primary Scale-Out Network Attached Storage"
18.	*Primary Scale-Out Network Attached Storage* Point#6 "Protocol Support" Storage should be bundled with NFS (versions 2/3/4 or above), CIFS (SMB), protocols to support heterogeneous application environments.		**Clause Amended.** Refer to Sl.no. #3 at A. Amendments above
19.	*Primary Scale-Out Network Attached Storage* Point#7 "Resiliency and High Availability" Controllers/Nodes must have redundant connectivity / cluster interconnects, to ensure that there is no Single Point of Failure (SPOF). Vendor shall ensure that concurrent failure of at-least 4 disks can be handled without any kind of downtime and vendor shall configure the erasure code accordingly.		**Clause Amended.** Refer to Sl.no. #4 at A. Amendments above
20.	*Primary Scale-Out Network Attached Storage* Point#8 "Front-end Client connectivity Layer" Each front-end controller shall also be offered with 4 x 10/25Gbps Ethernet Front-end ports and All Controllers with 100Gbps Back-end connectivity.		**No Change** To be guided by existing Technical specifications for "Primary Scale-Out Network Attached Storage"

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S No	Query/ Comments from the bidder	Additional Remarks	DGH Comments
21.	*Primary Scale-Out Network Attached Storage* Point#12 "Throughput" Offered Product must deliver sustained throughput of Read, 30GB/s and Write, 4GB/s performance. - Bidder needs to demonstrate this performance using IOR / IO Zone / IOmeter /fio as part of User Acceptance test. - The performance must be demonstrated with data at rest encryption feature switched on.		**Clause Amended.** Refer to Sl.no. #6 at A. Amendments above
22.	*Primary Scale-Out Network Attached Storage* "Quota Management" 1. Offered storage system shall support user, user group and directory quota. It shall be possible to define the quota at per directory as well as per user. 2. Quota capacity measurement shall be based upon byte usage within the file instead of logical size of the file. 3. Quota management shall support both soft and hard quota and writes shall be disabled after reaching the hard limit of the assigned quota. 4. Quota management shall also support sparse files and files with multiple hard links shall be counted only once.		**Clause Added.** Refer to Sl.no. #7 at A. Amendments above
23.	*Primary Scale-Out Network Attached Storage* "Storage Efficiency" Storage shall be offered with Global Data Aware Compression functionality. To increase Flash Endurance and Performance the file system should write in full stripe. Offered storage platform shall be offered with both in-line de-duplication and compression functionality before writing the data to actual NVMe data drives. Offered storage platform shall support both byte-range and global data compression.		**No Change** To be guided by existing Technical specifications for "Primary Scale-Out Network Attached Storage"

B	Response to Pre-bid Queries received from prospective bidders		
S No	Query/ Comments from the bidder	Additional Remarks	DGH Comments
24.	BID EVALUATION CRITERIA "Eligibility and experience of the bidder" Kindly request is to include "Similar Work" should be construed as supply, Installation & Commissioning of Scale Out Network Attached Storage or Data Loss Prevention (DLP) Solution or IT(Information Technology)/ITSM(Information Technology Service Management).		**Clause Amended.** Refer to Sl.no. #16 at A. Amendments above
25.	*Primary Scale-Out Network Attached Storage* Point#1 "Architecture" Offered product should be disaggregated Scale-Out file storage supporting NFS and SMB natively. - Offered product should have specialized Operating System optimized and tuned for serving data efficiently in scale-out architecture. - Offered Storage platform must be configured to 100% usable capacity on NVMe SSDs with maximum disk size of 15.36TB NVMe TLC Drives.		**No Change** To be guided by existing Technical specifications for "Primary Scale-Out Network Attached Storage"
26.	*Primary Scale-Out Network Attached Storage* Point#2 "Capacity & Scalability" shall be configured with 100 TiB of Usable capacity using max 15.36TB TLC NVMe Drives. - Storage shall be scalable to Exabyte of Usable capacity in the same single unified addressable name space. Storage system should be offered with required back-end switches and 100Gbps connectivity so that scalability should be done by just adding Controllers and Disk Enclosures in a disaggregated manner. Vendor shall ensure that concurrent failure of at-least 4 disks can be handled without any kind of downtime and vendor shall configure the erasure code accordingly.		**Clause Amended.** Refer to Sl.no. #1 at A. Amendments above
27.	*Primary Scale-Out Network Attached Storage* Point#12 "Controllers" Storage should be multi-controller Architecture should be offered with minimum 2 controllers scalable to at least 8 Controllers in disaggregated to configured in active-active shared everything architecture configuration with No Single Point of Failure allowing independent scale of Controller and capacity eliminated east-west traffic to avoid delay in response and I/Os can be distributed evenly among all Controllers without causing		**Clause Amended.** Refer to Sl.no. #2 at A. Amendments above

B	Response to Pre-bid Queries received from prospective bidders		
S No	Query/ Comments from the bidder	Additional Remarks	DGH Comments
	contention. - Storage system should have more than 512 GB Memory		
28.	*Primary Scale-Out Network Attached Storage* Point#4 "WORM Support" 1. Storage shall include immutable snapshots capability with required licenses for protecting snapshot from modification or deletion until a specified retention date. it shall not be possible to reduce the expiration time. 2. However, if the business need arise, then expiration period shall be shortened only through Dual authorization and through different set of authorized users only. The requested functionalities must be configurable from the GUI/Web Interface for the administrators.		**No Change** To be guided by existing Technical specifications for "Primary Scale-Out Network Attached Storage"
29.	*Primary Scale-Out Network Attached Storage* Point#6 "Protocol Support" Storage should be bundled with NFS (versions 2/3/4 or above), CIFS (SMB), protocols to support heterogeneous application environments.		**Clause Amended.** Refer to Sl.no. #3 at A. Amendments above
30.	*Primary Scale-Out Network Attached Storage* Point#7 "Resiliency and High Availability" Controllers/Nodes must have redundant connectivity / cluster interconnects, to ensure that there is no Single Point of Failure (SPOF). Vendor shall ensure that concurrent failure of at-least 4 disks can be handled without any kind of downtime and vendor shall configure the erasure code accordingly.		**Clause Amended.** Refer to Sl.no. #4 at A. Amendments above
31.	*Primary Scale-Out Network Attached Storage* Point#8 "Front-end Client connectivity Layer" Each front-end controller shall also be offered with 4 x 10/25Gbps Ethernet Front-end ports and All Controllers with 100Gbps Back-end connectivity.		**No Change** To be guided by existing Technical specifications for "Primary Scale-Out Network Attached Storage"

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S No	Query/ Comments from the bidder	Additional Remarks	DGH Comments
32.	*Primary Scale-Out Network Attached Storage* Point#12 "Throughput" Offered Product must deliver sustained throughput of Read, 30GB/s and Write, 4GB/s performance. - Bidder needs to demonstrate this performance using IOR / IO Zone / IOmeter /fio as part of User Acceptance test. - The performance must be demonstrated with data at rest encryption feature switched on.		**Clause Amended.** Refer to Sl.no. #6 at A. Amendments above
33.	*Primary Scale-Out Network Attached Storage* "Quota Management" 1. Offered storage system shall support user, user group and directory quota. It shall be possible to define the quota at per directory as well as per user. 2. Quota capacity measurement shall be based upon byte usage within the file instead of logical size of the file. 3. Quota management shall support both soft and hard quota and writes shall be disabled after reaching the hard limit of the assigned quota. 4. Quota management shall also support sparse files and files with multiple hard links shall be counted only once.		**Clause Added.** Refer to Sl.no. #7 at A. Amendments above
34.	*Primary Scale-Out Network Attached Storage* "Storage Efficiency" Storage shall be offered with Global Data Aware Compression functionality. To increase Flash Endurance and Performance the file system should write in full stripe. Offered storage platform shall be offered with both in-line de-duplication and compression functionality before writing the data to actual NVMe data drives. Offered storage platform shall support both byte-range and global data compression.		**No Change** To be guided by existing Technical specifications for "Primary Scale-Out Network Attached Storage"

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S No	Query/ Comments from the bidder	Additional Remarks	DGH Comments
35.	*Primary Scale-Out Network Attached Storage* Point#1 "Architecture" Offered product should be disaggregated Scale-Out file storage supporting NFS and SMB natively. - Offered product should have specialized Operating System optimized and tuned for serving data efficiently in scale-out architecture. - Offered Storage platform must be configured to 100% usable capacity on NVMe SSDs with maximum disk size of 15.36TB NVMe TLC Drives.		**No Change** To be guided by existing Technical specifications for "Primary Scale-Out Network Attached Storage"
36.	*Primary Scale-Out Network Attached Storage* Point#2 "Capacity & Scalability" shall be configured with 100 TiB of Usable capacity using max 15.36TB TLC NVMe Drives. - Storage shall be scalable to Exabyte of Usable capacity in the same single unified addressable name space. Storage system should be offered with required back-end switches and 100Gbps connectivity so that scalability should be done by just adding Controllers and Disk Enclosures in a disaggregated manner. Vendor shall ensure that concurrent failure of at-least 4 disks can be handled without any kind of downtime and vendor shall configure the erasure code accordingly.		**Clause Amended.** Refer to Sl.no. #1 at A. Amendments above
37.	*Primary Scale-Out Network Attached Storage* Point#12 "Controllers" Storage should be multi-controller Architecture should be offered with minimum 2 controllers scalable to at least 8 Controllers in disaggregated to configured in active-active shared everything architecture configuration with No Single Point of Failure allowing independent scale of Controller and capacity eliminated east-west traffic to avoid delay in response and I/Os can be distributed evenly among all Controllers without causing contention. - Storage system should have more than 512 GB Memory		**Clause Amended.** Refer to Sl.no. #2 at A. Amendments above

B	Response to Pre-bid Queries received from prospective bidders		
S No	Query/ Comments from the bidder	Additional Remarks	DGH Comments
38.	*Primary Scale-Out Network Attached Storage* Point#4 "WORM Support" 1. Storage shall include immutable snapshots capability with required licenses for protecting snapshot from modification or deletion until a specified retention date. it shall not be possible to reduce the expiration time. 2. However, if the business need arise, then expiration period shall be shortened only through Dual authorization and through different set of authorized users only. The requested functionalities must be configurable from the GUI/Web Interface for the administrators.		**No Change** To be guided by existing Technical specifications for "Primary Scale-Out Network Attached Storage"
39.	*Primary Scale-Out Network Attached Storage* Point#6 "Protocol Support" Storage should be bundled with NFS (versions 2/3/4 or above), CIFS (SMB), protocols to support heterogeneous application environments.		**Clause Amended.** Refer to Sl.no. #3 at A. Amendments above
40.	*Primary Scale-Out Network Attached Storage* Point#7 "Resiliency and High Availability" Controllers/Nodes must have redundant connectivity / cluster interconnects, to ensure that there is no Single Point of Failure (SPOF). Vendor shall ensure that concurrent failure of at-least 4 disks can be handled without any kind of downtime and vendor shall configure the erasure code accordingly.		**Clause Amended.** Refer to Sl.no. #4 at A. Amendments above
41.	*Primary Scale-Out Network Attached Storage* Point#8 "Front-end Client connectivity Layer" Each front-end controller shall also be offered with 4 x 10/25Gbps Ethernet Front-end ports and All Controllers with 100Gbps Back-end connectivity.		**No Change** To be guided by existing Technical specifications for "Primary Scale-Out Network Attached Storage"

B	Response to Pre-bid Queries received from prospective bidders		
S No	Query/ Comments from the bidder	Additional Remarks	DGH Comments
42.	*Primary Scale-Out Network Attached Storage* Point#12 "Throughput" Offered Product must deliver sustained throughput of Read, 30GB/s and Write, 4GB/s performance. - Bidder needs to demonstrate this performance using IOR / IO Zone / IOmeter /fio as part of User Acceptance test. - The performance must be demonstrated with data at rest encryption feature switched on.		**Clause Amended.** Refer to Sl.no. #6 at A. Amendments above
43.	*Primary Scale-Out Network Attached Storage* "Quota Management" 1. Offered storage system shall support user, user group and directory quota. It shall be possible to define the quota at per directory as well as per user. 2. Quota capacity measurement shall be based upon byte usage within the file instead of logical size of the file. 3. Quota management shall support both soft and hard quota and writes shall be disabled after reaching the hard limit of the assigned quota. 4. Quota management shall also support sparse files and files with multiple hard links shall be counted only once.		**Clause Added.** Refer to Sl.no. #7 at A. Amendments above
44.	*Primary Scale-Out Network Attached Storage* "Storage Efficiency" Storage shall be offered with Global Data Aware Compression functionality. To increase Flash Endurance and Performance the file system should write in full stripe. Offered storage platform shall be offered with both in-line de-duplication and compression functionality before writing the data to actual NVMe data drives. Offered storage platform shall support both byte-range and global data compression.		**No Change** To be guided by existing Technical specifications for "Primary Scale-Out Network Attached Storage"

B	Response to Pre-bid Queries received from prospective bidders		
S No	Query/ Comments from the bidder	Additional Remarks	DGH Comments
45.	*DLP Solution* Solution should be available to fingerprint sensitive document and image files to classify sensitive information for blocking		**No Change** To be guided by existing Technical specifications for "DLP Solution"
46.	*BID EVALUATION CRITERIA* We would request to change the clause Bidder, during the last Seven years OR Bidder/ OEM must have successfully carried out and completed either three similar work of value Rs 1,50,00,000 each or two similar work of value Rs 2,50,00,000 each or one similar work of value Rs 3,50,00,000. Documentary evidences like service contracts/ purchase orders / equivalent documents showing operations of such jobs along with completion Certificate(s) or payment certificates or any other documents which substantiate completion of the jobs, issued by the client(s) with contact details of the issuing person/organization (e-mail address, Phone Number, Fax number etc.) must be submitted along with the bid. "Similar Work" should be construed as supply, installation & commissioning of Scale-Out Network Attached Storage Or Enterprise Storage or Data Loss Prevention (DLP) Solution		**Clause Amended.** Refer to Sl.no. #16 at A. Amendments above
47.	*Primary Scale-Out Network Attached Storage* Point#7 "Resiliency and High Availability" The offered solution should be fully protected against any failure of disks, storage nodes/Controller, power supplies & network ports, to ensure that there is no Single Point of Failure (SPOF). - Storage should support non-disruptive maintenance and upgrades. - The Proposed Storage system should have capability to replicate data to a remote site using synchronous or asynchronous file level replication to protect against a site loss scenerio. - The solution should be configured in High Availability mode and should not have any Single Point of Failure providing Six 9's of availability (99.9999%). The offered solution should be fully protected against any failure of disks, Storage nodes / Controller, power supplies & Network ports.		**Clause Amended.** Refer to Sl.no. #4 at A. Amendments above

B	Response to Pre-bid Queries received from prospective bidders		
S No	Query/ Comments from the bidder	Additional Remarks	DGH Comments
48.	*Primary Scale-Out Network Attached Storage* Point#9 "Data Security" Offered Storage must support data encryption in-line with industry standards. - The storage system should be offered with the capability to identify and remediate ransomware attacks and protect and recover data from any such attacks. - The storage solution must be offered with snapshot functionality to capture point-in-time copies of data along with suitable mechanisms to protect them from malicious modifications. - Should allow simultaneous access to the same file/data using diffent protocols like NFS, CIFS etc. for data sharing between multiple hosts. The offered NAS System should provide file locking for data protection from corruption while sharing files between multiple hosts.		**Clause Amended.** Refer to Sl.no. #5 at A. Amendments above
49.	*Backup Solution* The solution should be proposed with 50TB capacity on appliance along with upfront backu p software capacity license for 50TB or 50 instance license.		**Clause Amended.** Refer to Sl.no. #8 at A. Amendments above
50.	*Backup Solution* "New Additions Suggested" - The backup software must have YARA rules defined in the system. - The proposed solution should have on demand scans available for malware attacks. - The backup Software must have inline detection & in guest detection via guest indexing against any malware attacks. - The proposed backup software should have four eyes approval for any backup deletion.		**Not Agreed**

B	Response to Pre-bid Queries received from prospective bidders		
S No	Query/ Comments from the bidder	Additional Remarks	DGH Comments
51.	*DLP Solution* "New Additions Suggested" - Proposed solution should be able to Sandbox applications; to restrict them from only making network connections to specified destination IPs or URLs - Proposed Solution should have the ability to inspect content using Optical Character Recognition (OCR) for standard and clear images no less than 72 DPI and rotation not greater than 3 degrees. - Proposed Solution should have the ability to identify User malicious activities across avenues of Data Theft, Productivity Loss, IT Misuse, Financial Loss, Operational Loss, Inappropriate Employee Behaviour and Cyber Security Risks. - Proposed Solution should have the ability to identify User malicious activities and behavioral anomalies across channels of Application Activity, Application File Access Activity, Browser Activity, User Activity Time Tracking, CD/DVD Activity, Data At Rest Activity, File Upload Activity (Web and FTP), Gmail and OWA activity, Outbound Network file transfers, Printer Activity, Web Search Activity, SMTP based Outbound Email Activity,USB activity - Proposed Solution should be capable of Shadow Logging Emails, File Uploads, USB Transfers, Print, Application File Access, Web Uploads etc - Proposed Solution should support central key management for with Windows Bitlocker - Proposed solution must store all information in encrypted form and should implement AES 256 encryption in data storage at endpoints. Solution should enforce TLS 1.2 - Proposed Solution should have the ability to run Data Discovery at endpoints at one time and incremental level - Proposed Solution should support Windows (7, 8.1,10,11), MacOS (Big Sur, Catalina, Monterey) and Linux OS (Ubuntu 18 LTS GUI and 20 LTS GUI) Desktop endpoints - Proposed Solution should be capable of Entity Level Behaviour Analytics depiction of Application Activity, Application File Access Activity, Browser Activity, File Upload Activity, FTP File Upload Activity, Gmail Web Activity, Network File Share Activity, Outlook Web Activity, Search Engine Activity, SMTP Email Activity, USB, Printer Activity, Data-at-Rest Activity		**Not Agreed**

B	Response to Pre-bid Queries received from prospective bidders		
S No	Query/ Comments from the bidder	Additional Remarks	DGH Comments
52.	*Primary Scale-Out Network Attached Storage* Point#1 "Architecture" Offered product should be disaggregated Scale-Out file storage supporting NFS and SMB natively. - Offered product should have specialized Operating System optimized and tuned for serving data efficiently in scale-out architecture. - Offered Storage platform must be configured to 100% usable capacity on NVMe SSDs with maximum disk size of 15.36TB NVMe TLC Drives.		**No Change** To be guided by existing Technical specifications for "Primary Scale-Out Network Attached Storage"
53.	*Primary Scale-Out Network Attached Storage* Point#2 "Capacity & Scalability" shall be configured with 100 TiB of Usable capacity using max 15.36TB TLC NVMe Drives. - Storage shall be scalable to Exabyte of Usable capacity in the same single unified addressable name space. Storage system should be offered with required back-end switches and 100Gbps connectivity so that scalability should be done by just adding Controllers and Disk Enclosures in a disaggregated manner. Vendor shall ensure that concurrent failure of at-least 4 disks can be handled without any kind of downtime and vendor shall configure the erasure code accordingly.		**Clause Amended.** Refer to Sl.no. #1 at A. Amendments above
54.	*Primary Scale-Out Network Attached Storage* Point#12 "Controllers" Storage should be multi-controller Architecture should be offered with minimum 2 controllers scalable to at least 8 Controllers in disaggregated to configured in active-active shared everything architecture configuration with No Single Point of Failure allowing independent scale of Controller and capacity eliminated east-west traffic to avoid delay in response and I/Os can be distributed evenly among all Controllers without causing contention. - Storage system should have more than 512 GB Memory		**Clause Amended.** Refer to Sl.no. #2 at A. Amendments above

B	Response to Pre-bid Queries received from prospective bidders		
S No	**Query/ Comments from the bidder**	**Additional Remarks**	**DGH Comments**
55.	*Primary Scale-Out Network Attached Storage* Point#4 "WORM Support" 1. Storage shall include immutable snapshots capability with required licenses for protecting snapshot from modification or deletion until a specified retention date. it shall not be possible to reduce the expiration time. 2. However, if the business need arise, then expiration period shall be shortened only through Dual authorization and through different set of authorized users only. The requested functionalities must be configurable from the GUI/Web Interface for the administrators.		**No Change** To be guided by existing Technical specifications for "Primary Scale-Out Network Attached Storage"
56.	*Primary Scale-Out Network Attached Storage* Point#6 "Protocol Support" Storage should be bundled with NFS (versions 2/3/4 or above), CIFS (SMB), protocols to support heterogeneous application environments.		**Clause Amended.** Refer to Sl.no. #3 at A. Amendments above
57.	*Primary Scale-Out Network Attached Storage* Point#7 "Resiliency and High Availability" Controllers/Nodes must have redundant connectivity / cluster interconnects, to ensure that there is no Single Point of Failure (SPOF). Vendor shall ensure that concurrent failure of at-least 4 disks can be handled without any kind of downtime and vendor shall configure the erasure code accordingly.		**Clause Amended.** Refer to Sl.no. #4 at A. Amendments above
58.	*Primary Scale-Out Network Attached Storage* Point#8 "Front-end Client connectivity Layer" Each front-end controller shall also be offered with 4 x 10/25Gbps Ethernet Front-end ports and All Controllers with 100Gbps Back-end connectivity.		**No Change** To be guided by existing Technical specifications for "Primary Scale-Out Network Attached Storage"
59.	*Primary Scale-Out Network Attached Storage* Point#12 "Throughput" Offered Product must deliver sustained throughput of Read, 30GB/s and Write, 4GB/s performance. - Bidder needs to demonstrate this performance using IOR / IO Zone / IOmeter /fio as part of User Acceptance test. - The performance must be demonstrated with data at rest encryption feature switched on.		**Clause Amended.** Refer to Sl.no. #6 at A. Amendments above

B	Response to Pre-bid Queries received from prospective bidders		
S No	Query/ Comments from the bidder	Additional Remarks	DGH Comments
60.	*Primary Scale-Out Network Attached Storage* "Quota Management" 1. Offered storage system shall support user, user group and directory quota. It shall be possible to define the quota at per directory as well as per user. 2. Quota capacity measurement shall be based upon byte usage within the file instead of logical size of the file. 3. Quota management shall support both soft and hard quota and writes shall be disabled after reaching the hard limit of the assigned quota. 4. Quota management shall also support sparse files and files with multiple hard links shall be counted only once.		**Clause Added.** Refer to Sl.no. #7 at A. Amendments above
61.	*Primary Scale-Out Network Attached Storage* "Storage Efficiency" Storage shall be offered with Global Data Aware Compression functionality. To increase Flash Endurance and Performance the file system should write in full stripe. Offered storage platform shall be offered with both in-line de-duplication and compression functionality before writing the data to actual NVMe data drives. Offered storage platform shall support both byte-range and global data compression.		**No Change** To be guided by existing Technical specifications for "Primary Scale-Out Network Attached Storage"

B	Response to Pre-bid Queries received from prospective bidders		
S No	Query/ Comments from the bidder	Additional Remarks	DGH Comments
62.	BID EVALUATION CRITERIA "Eligibility and experience of the bidder" Bidder, during the last five years, must have successfully carried out and completed either three similar work of value Rs 1,50,00,000 each or two similar work of value Rs 2,50,00,000 each or one similar work of value Rs 3,50,00,000. Documentary evidences like service contracts/ purchase orders / equivalent documents showing operations of such jobs along with completion Certificate(s) or payment certificates or any other documents which substatiate completion of the jobs, issued by the client(s) with contact details of the issuing person/organization (e-mail address, Phone Number, Fax number etc.) must be submitted along with the bid. "Similar Work" should be construed as supply, installation & commissioning of Scale Out SAN/NAS/Unified Storage/Backup Solutions or Data Loss Prevention (DLP) Solution. Note:- Product Item specific (SAN/NAS/Unified Storage/Backup Solutions or Data Loss Prevention (DLP) Solution) Value from the clubbed items PO Value will be calculated as Credential		**Clause Amended.** Refer to Sl.no. #16 at A. Amendments above
63.	DLP Solution Solution should be able to identify Sensitive Data using Sensitive Keyword based markers/dictionaries, Pattern/Regex based markers, Unstructured Fingerprinted Data based markers, file attributes-based markers	The words like Markers are not related to DLP solution, moreover the many of the critical functionalities are missing, Hence we request you to please amend the clause as : Solution should be able to identify Sensitive Data using Sensitive Keyword, dictionaries, based markers, Pattern/Regex based markers, Unstructured and Structured Fingerprinted Data with Partial finger printing based markers, file attributes-based, Machine Learning, NLP scritps	**No Change** To be guided by existing Technical specifications for "DLP Solution"
64.	DLP Solution Solution should be able to block Web File Uploads based on Whitelisted or Blacklisted Domains or Email Addresses (Sender domain), File Type, File Attributes (Password Protection / Data Classification Meta Tags) and File Names while also sensitive content inside files	It is critical that the encryption should be natively via the solution for the critical content which should be flexible for controlling interdepartment and outside data movement. Hence request you to please amend the clause as : Solution should be able to prevent Data Loss by enforcing encryption of sensitive data when copied to USB storage devices and must apply both password based	**No Change** To be guided by existing Technical specifications for "DLP Solution"

B	Response to Pre-bid Queries received from prospective bidders		
S No	Query/ Comments from the bidder	Additional Remarks	DGH Comments
		or profile based encryption natively from same OEM with out depending upon any other license.	
65.	*DLP Solution* Solution should support integration with Microsoft Active Directory; for synchronisation of organization and User information	Please explaination the requirement of synchronisation of organization and User information in context to DLP. We understand the requirement is applying user-based policies, please confirm our understanding is correct on this clause.	RFP Clause is Self Explanatory
66.	*DLP Solution* The solution should provide a built-in GUI for reviewing data discovery scanning results for user activity, deployment, data storage trends.	There is no relevence of deployment and storage trend with DLP Discovery. It looks like 2 different requirements are mergered into one with out making any sense. Hence we request you to please amend this clause as : The solution should be able to perform discovery only when the endpoint is connected to external power or Machine is Idle, and this should be done using solution GUI.	**No Change** To be guided by existing Technical specifications for "DLP Solution"
67.	*DLP Solution* Solution should be able to implement temporary policies for uplifting the user privileges for a defined duration.	NOT a DLP features. And looks to be favoring a specific OEM only. Hence, please delete this clause.	**Clause Deleted** Refer to Sl.no. #11 at A. Amendments above
68.	*DLP Solution* The solution should provide a centralized, web-based Administration Console for classification configuration and policy management.	If DGH is looking for Data Classification, then is should come up with detailed requirement for Data Classification solution rather than just the one word to favour a particular OEM. Hence, request you to please delete this clause.	**No Change** To be guided by existing Technical specifications for "DLP Solution"

B	Response to Pre-bid Queries received from prospective bidders		
S No	Query/ Comments from the bidder	Additional Remarks	DGH Comments
69.	*DLP Solution* "New Additions Suggested" - The solution should have a comprehensive list of pre-defined policies and templates to identify and classify information pertaining to different industry like Energy, Petroleum industry vertical etc. and India IT Act (Indian Names, Aadhar, PAN, Passport, Driving license, Form 16) which can be used to create policies. Solution should have minimum 1500+ templates from Day1 as inbuilt from OEM - The solution should enforce policies to detect low and slow data leaks from day1 Network Data discovery task must support differential and full scanning options. The system should support incremental scanning during discovery to reduce volumes of data to be scanned. The system should allow automatic movement or relocation of file, delete files during discovery - The DLP Solution must provide visibility into Broken Business process. For ex:-if unsecured sensitive content is sent daily from several users to a business partner, the users are probably not aware that they are doing something wrong. Solution must support APIs for Policy management that can be used to manage DLP and Discovery policies, rules and resources along with APIs for Incident Management to get a list of DLP & Discovery incidents, update & remediate those incidents. - The solution should Support Parts blocking on endpoint when configurable list of specific application are running, no matter it is in the foreground or background. The actual Parts' capture will also be submitted to the DLP system as forensic evidence.		**Not Agreed**

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