

**IN THE HIGH COURT OF DELHI AT NEW DELHI**

F.No.624/DA-2/IT/DHC/No. 01

Dated: 20-10-2022

From,

The Registrar General  
Delhi High Court  
New Delhi

To,

(On the website of High Court)

**Sub: Tender calling quotations for purchase of Storage Solution (Qty.:02) with 5 years on-site comprehensive warranty plus two years AMC along with the support of one Resident Engineer, for Delhi High Court.**

This Court intends to purchase two units of Storage Solution of reputed make/brand - one for installation at Delhi High Court premises and other for installation at Disaster Recovery Site (i.e. at different seismic zone than Delhi), with 5 years on-site comprehensive warranty alongwith two years AMC for both the devices/Solutions along with support of one experienced Resident Engineer (during the warranty and AMC period). **The Compliance sheet containing the minimum technical specifications of the required Storage Solution are enclosed herewith at Annexure A.**

**The terms & conditions of this tender are as under:**

1. Interested firms/vendor(s) authorized by OEM are requested to submit the necessary quotation(s) and copy of current authorization letter of the OEM (whose product is being offered) and Earnest Money Deposit (EMD) of 3% of total proposed cost for purchase of two units of Storage Solution by way of Demand Draft or Bankers Cheque drawn in favour of "The Registrar General, Delhi High Court" payable at New Delhi.
2. **Quotations received without EMD shall be summarily rejected and no request for waiver on any ground will be entertained.**
3. The vendor must submit duly filled Technical Compliance Sheet (**Annexure- A**) along with the quotation. Non-compliance of this condition, will summarily lead to rejection of the quotation.
4. Sealed envelope containing the quotation must reach to the AOJ (IT Branch), Lawyers' Chamber Block-III, Room No. 6, Ground Floor, Delhi High Court on or before 10/11/2022 till 5:30 P.M. The envelope should be addressed in the name of "**The Registrar General, Delhi High Court, New Delhi.**" The subject "**Quotation for Storage Solution**" and due date should be superscribed on the envelope.
5. No quotation shall be entertained after due date. Envelope(s) without subject shall be summarily rejected.
6. The **validity of rates should not be less than 180 days** from the last date of submission of quotations and tax rate applicable should be clearly mentioned. Quotations with less period of validity of rates shall be summarily rejected.

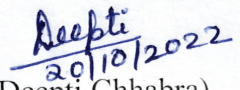
7. Vendor(s) offering quotation for multiple make/model of Storage Solution will have to submit separate authorization letter(s) from different manufacturer(s).
8. The quotations must be tendered strictly in the format mentioned in **Annexure 'B'** of this tender. Quotations offered in any other format than prescribed shall be liable to be rejected.
9. The DD/Pay order towards EMD of all the tenderers, except the lowest three, shall be returned to vendors on their written request after 45 days of the last date of Tender Notice & EMD of successful tenderer will be returned only after supply and successful installation of the first order placed on the firm after fulfilling all codal formalities against receipt.
10. The DD/Pay Order of L-2 & L-3 will be returned upon written request after issuance of the Purchase order to the successful tenderer. If the offer of quotation is withdrawn by the tenderer before/after opening of tender or if any other default is found in the quotation, the amount of EMD shall be forfeited and the firm will be blacklisted from participation in future tenders of this Court.
11. **The tenderer must have adequate experience of supply, installation and after sales support in the field of Network Storage Solution .**
12. The participating vendor(s) should also mention the offered or similar/equivalent devices installed by them at Govt. Sector, PSUs, private sector earlier and also share the Mobile number of technical person(s) from whom the performance of the installed devices can be independently ascertained.
13. The selected vendor will be required to execute **Service Agreement** with the Delhi High Court and submit **Performance Bank Guarantee** equivalent to 3% of the total invoice amount valid for five years and three months for the optimum support services during the warranty period. And in case of deficiency in support services during the warranty period, the Performance Bank Guarantee will be liable to be invoked.
14. Selected Vendor will be required to submit valid authorization letter in original or copy of valid Authorization letter issued by OEM duly attested under the seal of selected vendor at the time of submitting Invoice/Bill for payment.
15. It may be noted that the final rates should be mentioned as unit price inclusive of GST and taxes applicable should be clearly and separately mentioned.
16. The selected L-1 firm or any other firm(s) as desired by the authorities shall be required to give the demonstration of the Storage Solution offered by them to check whether it meets the requirements of this Court and after necessary approval, the successful bidder shall be bound to supply the required items as expeditiously as possible or within the days as mentioned in the Purchase Order, failing which the purchase order issued shall be deemed to be cancelled without entertaining any communication in this regard unless sufficient cause is shown (supported by documentary proof) for such lapse.
17. The firm / vendor shall nominate an experienced Resident Engineer who in coordination with the Dealing Assistant of IT Cell shall receive complaints and keep a proper complaint register mentioning the time of the complaint received, the time when the



complaint was duly attended to and the defects rectified, which shall be subject to inspection by any officer / official of this Court at any time during the warranty period and the extended two years of AMC after warranty.

18. The OEM must ensure supply, installation, configuration and testing of the complete solution. The Five years comprehensive on-site warranty for the complete solution shall also include supply & installation of updates and upgrades of the software including BIOS, firmware, OS, patches, and storage resource management software etc with Minimum two years extended AMC after completion of five years warranty. The resident engineer deputed by the firm will look after the complaints lodged in respect of the installed Storage solutions during the warranty as well as the AMC period.
19. In case the Purchase Order awarded to successful vendor is cancelled due to non-supply of goods within the stipulated period, the Purchase Order will be awarded to the next eligible vendor/firm.
20. If multiple quotations are submitted by a firm/vendor, all such quotations shall be liable to be rejected at the first instance.
21. The firm/vendor shall also have to give an undertaking (as per Annexure- 'C') that the firm or its Partner/Director/Proprietor has not been blacklisted/banned and its Business dealings with the Central/State Government/Public Sector Undertakings/Autonomous Bodies have not been banned/terminated on account of poor performance/conduct and also that all the terms and conditions of the instant Tender Notice are acceptable to them. The quotations received without undertaking shall be summarily rejected.
22. After opening of the sealed quotation, if any correction is found in the offered rate, which renders the whole Tender process doubtful or ambiguous, the said quotation shall be summarily rejected.
23. Withdrawal of quotation(s) after their opening may attract blacklisting of the firm/vendor from participation in any future tender process of this Court for a period of twelve months from the date of blacklisting.
24. In case the firm/vendor wants any clarification regarding this Tender, Mr. Zameem Ahmad Khan, JD (IT) at Tel. No. 011-43010101 (Ext. 4563) may be contacted.

This Court reserves the right to modify/amend the quotation letter/terms & conditions at a later stage.

Yours truly,  
  
(Deepti Chhabra)  
Deputy Registrar (IT)  
for Registrar General

CC to:- Joint Director (IT), DHC.- for uploading on the official website of Delhi High Court.



Compliance SheetSpecifications for the storage solution**Scale out NAS Storage system – 2 Qty (DC + DR)**

S. No.	Specifications	Yes/No	Details (if any)
1	The storage solution should be true scale out file system based NAS. Scale out NAS should be from the same OEM as the object storage.		
2	All subsystems of the storage like hardware, interconnect, OS, NAS software's must be fully inter-compatible and provided & supported by the same principals/ OEM.		
3	The system must be a dedicated appliance with specifically optimized OS for scale out operations. Entire stack must be Single OEM supported. Storage OS should not be Windows based or a general-purpose Linux or a simple SMB/ NFS configured file server. The Storage system should be suitably configured for achieving enhanced performance and throughput		
4	It must be offered with more than 2 controllers in active-active mode with automatic failover to each other in case of failure.		
5	Highly available configuration with No Single Point of Failure (NSPoF) architecture and redundancy features at all levels, controllers, hot swap power supplies, PDUs, cache, links between subsystems etc.		
6	Storage Solution must provide protection against simultaneous dual disk failure.		
7	The offered all flash storage tier of 200TiB should be configured to offer NFS throughput of more than 12 GBps. The Performance should be submitted on letterhead of storage OEM. Performance should not degrade by more than 35% on failure of a single controller/node.		
9	The Storage solution must support scalability to at least 24 nodes/controllers.		
11	Offered unified storage solution must be configured with a minimum DRAM cache of 256GB or higher across controllers		
12	Must be configured with a total of 200TiB usable capacity on NVMe drives to ensure availability even if dual drives fails concurrently using not higher than 15.36TB NVMe drives. An additional 10% usable capacity, or equivalent number of hard drives must be provided as host spares.		
14	The offered storage system must support NFS, SMB, S3 protocols and required licenses for the same must be provided. Licenses should be provided for all storage protocols supported by the storage.		

	Storage must be multiprotocol allowing same data to be accessed simultaneously via 2 or 3 protocols at the same time, specifically SMB, NFS and S3. If this feature is not available, additional 30% usable capacity should be offered		
15	<p>Must be configured with the following minimum front-end populated interfaces on the storage system per node/controller:</p> <ul style="list-style-type: none"> <li>- 2 x 100Gb QSFP28 ports for front end</li> <li>- 2 x 100GB QSFP28 ports for back end</li> </ul> <p>All inter node/ inter controller communication should be via a dedicated network and should not use the High Court's network for the same.</p> <p>For inter node/ inter controller communication network, 2 switches should be provided with 32 x 100GBps QSFP28 ports</p>		
16	Must support heterogeneous client operating systems (on Object, block and file) which include all popular flavours of Windows, Linux and virtualization hypervisors (VMware, Hyper-V, etc.)		
17	Must provide multiple levels of access control including role-based security and auditing.		
18	Must have Active Directory and LDAP integration support		
19	Must provide user/ group/ directory-based file system quotas with access controls		
21	The storage Solution must have a replication feature. Required license for replication must be supplied.		
22	The storage system & software must provide for configuring data tiering/movement to offered Object storage based on the defined policy e.g. Age of data or inactive data to be moved to Object Storage while maintaining single name space. Any add-on hardware or software required must be offered for the smooth functioning of the solution with High Availability.		
23	The file systems should have the capability to grow online.		
24	Ethernet trunking and link aggregation		
26	Storage management software (Web GUI, CLI) for configuring, managing & administering storage and associated functionalities including deployment, automation, provisioning, protection and continuous system monitoring, auditing, advanced remote diagnostics.		
27	<p>a) All required interconnection cables, fibre patch cables for all the configured interfaces to be supplied.</p> <p>b) Storage OEMRACK(s) must be supplied.</p>		

28	<p>All required licenses must be provided for enabling the storage system as required. Offered solution must be configured with</p> <ul style="list-style-type: none"> <li>a) SEC17a-4f compliant WORM protection for NAS data that must be protected from deletion and modification.</li> <li>b) Snapshot capability must be offered, licenses for the same should be offered. Solution must support hourly snapshots for 30 days retention to recover data due to unintentional deletes, modifications.</li> <li>c) Storage must be offered with inline and post process data reduction capability. In case inline or post process data reduction capability is not available, additional 20% usable capacity should be offered.</li> <li>d) Storage must be offered with user, group quota capability. Any licenses for the same must be offered.</li> </ul>		
30	<p>During the warranty as well as AMC period, failed hard disks must be replaced with new ones at no extra charges and the faulty disks will not be returned to the vendor.</p>		

**Object Storage” 2 Qty. (DC + DR)****Vendor and Platform:-**

S.No.	Specification	Yes/No	Details (if any)
1.	Offered object storage should be a hardware appliance in which all hardware and software is offered and supported by a single OEM. Object storage should be from the same OEM as the scale out NAS storage.		
2.	Offered object storage should be with 1PiB usable capacity after erasure coded data protection, with the capability of scaling to hundreds of petabytes. Erasure coded data should be configured with no data loss or data unavailability in the case of both scenarios (a) 4 simultaneous disk failures or (b) 1 node/controller failure.  Storage sizing should take into account that 1PiB consists of 40% object size less than 100KiB and rest of the objects have a size more than 100 KiB  Storage should be sized to offer S3 READ (GET) performance of more than 6GBps at 1MB object size. The Performance should be submitted on letterhead of storage OEM.		
3.	Object Storage shall scale by dynamically adding additional nodes to system. The upgrades should be carried out non-disruptively online with support for automated data rebalance across the nodes. It should support.  (a.) Nodes of different generations (e.g. different processors and disk configurations) must be supported in same object storage system.  (b.) Added capacity shall be immediately available in advance of any internal rebalancing of existing data.		
4.	Object storage system must support a multi-site active-active architecture where data can span across multiple geographic locations, and provide a global namespace with anywhere read and write access.		
5.	All nodes of the object storage system must process write requests and write to different sets of disks to take advantage of all spindles and NICs in cluster.		

**Access Protocols**

S.No.	Specification	Yes/No	Details (if any)
6.	Object Storage shall support protocols like S3, Swift, http / https.		
7.	Object storage system should support Active Directory/LDAP integration and should support OpenStack Keystone identity services when utilizing the OpenStack Swift API.		



**Compliance and Data Lifecycle Support**

S.No.	Specification	Yes/No	Details (if any)
8.	Object Storage must be certified as supporting SEC Rule 17a-4(f) and CFTC 1.31(b)-(c) standard for electronic record storage. Should be validated by 3rd Party.		
9.	Object storage should support IAM (Identity and access management) with object tagging to enable granular access to resources.		
10.	Object Storage shall have ability to set default retention periods for different categories of objects/content in case application(s) cannot specify retention period.		
11.	Object storage shall allow users to specify expiration policies so that data is automatically removed from the system after defined interval without additional user or application interaction.		
12.	Object Storage shall allow a set retention period when object is first archived and then a specific retention period when triggered by known event (e.g. set retention period of image for X years after an image has been approved for storage).		
13.	Object Storage shall allow hold to be set on a specific object to prevent deletion until hold is released even if it exceeds the object's retention period (e.g. due to litigation/lawsuit at court).		
14.	Object Storage shall support the Amazon S3 interface to store, retrieve and retain record objects including: <ul style="list-style-type: none"> <li>• Set a policy for a Namespace with a retention period that can be applied to an object by using the policy name when storing a record object storage.</li> <li>• Set and extend a retention period for a Bucket which will then be used as one of the means for determining the retention period for all record objects stored by S3 in the Bucket and set a retention period for each record object sent to object storage.</li> <li>• Support for multi – part upload of large files</li> </ul>		

**Data Access and Protection**

S.No.	Specification	Yes/No	Details (if any)
15	Object Storage shall protect all objects with Erasure Coding without the dependencies of RAID storage. And the erasure coded data should be encoded equally efficiently, regardless of object size. Object metadata should be stored as 2 or more copies, so operations are not hampered due to any rebuild operation on metadata.		
16.	Object Storage shall be WAN optimized by protecting data from local failures using Erasure Coding and from site failures using replication. Object Storage shall support multiple sites (greater than 2)		

17.	Object Storage shall allow any object to be accessed from any node at any site with most recent version of data always available (strong consistency) to the requestor.		
18.	Object Storage shall support metadata indexing and search, with ability to apply unlimited metadata tags to the object.		
19.	Object Storage must recover from any disk or node failure without connectivity dependency to remote sites.  a) All disk and node rebuilds should leverage protection from within the same site so as to avoid consuming expensive and limited WAN bandwidth and minimize rebuild times during rebuild operations.  b) On disk or node failure, Object Storage shall redistribute exposed data across as many drives and nodes as possible to take advantage of multiple spindles and minimize data exposure.		
20.	Object Storage shall support encryption of all object data, at rest and in-flight.		
21.	Object Storage shall provide versioning capability to protect and record Object-level changes.		
22.	To provide heightened security, Object Storage should allow administrators to disable access to the underlying OS without impacting administrative and end-user APIs and functions. It should also allow lockdown of ports not in use to ensure greater security.		

### Management

S.No.	Specification	Yes/No	Details (if any)
23.	Object Storage shall be managed and monitored via integrated UI, CLI & RESTful APIs.		
24.	Object Storage shall support multi-tenant architecture including ability to apply quota limits on specific sections within the object store.		
25.	Object Storage shall support metering capabilities including reporting on capacity, object count, and bandwidth.		
26.	Object Storage should also provide for REST API for more advanced monitoring and auditing capabilities.		
27.	Object storage system should support audit trails through the management GUI.		
28.	Object Storage shall support SNMP and Syslog protocols to provide information related to object storage.		
29.	Object storage must support Storage-as-a-Service tenants, detailed metering, self-service portal, multi-tenancy and consumption intelligence.		

### Load Balancer

S.No.	Specification	Yes/No	Details (if any)
30.	Storage should be offered with hardware load balancers in HA. Load balancers should be able to work in both		

	modes (1) Local load balancer (2) Global server load balancing (GSLB). Load balancer must have L4 and L7 load balancing capability, and should support throughput equal to that of the object storage.		
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### Support and AMC

S.No.	Specification	Yes/No	Details (if any)
31.	During the warranty as well as AMC period, failed hard disks must be replaced with new ones at no extra charges and the faulty disks will not be returned to the vendor.		





**Annexure - 'B'**

Name of the firm:- \_\_\_\_\_ Address of the Firm: \_\_\_\_\_

Contact No.: \_\_\_\_\_ Email Address: \_\_\_\_\_

**Price Bid**

Description of Product	Price offered for one unit (Without taxes) in Rs.	Tax Rate (%)	Total Price offered for one unit (incl.of taxes)	Total Price offered for Two Units and Services of one Resident Engineer.	Under - taking furnished (Yes/No.)	Validity of Rates: (180 days or more)	Five years onsite comprehensive warranty + 2 years extended AMC (Yes or No.)	Remarks (if any)
A	B	C	D	E	F	G	H	I
Storage Solution  Make: _____  Model _____								

Price as per column 'D' (per unit) in words

\_\_\_\_\_

Signature of the authorised Signatory  
of the firm/company/organization

Official Stamp/Seal

Date:

Place:

- Interlineation/Corrections/Overwriting not allowed





