



**Amendment in the Tender Schedule for Supplying and commissioning of 02 units Storage System (Capacity- 600 TB each) with License and required accessories for critical business data storage at DC & DRS of the Bank are as follows:**

**Technical terms & conditions:**

**Table-A: Technical Specification and Mandatory features for the proposed Storage System.**

<b>General Specifications:</b>			
Ex. SL No.	Name of feature with page no	Existing Technical Specification as per Tender Schedule	Amendments
2	Page no: 11 Model	Should be specified (model must not be older than 2024)	The product launching date of proposed Model of specific OEM couldn't be older than 2023 but to follow the below conditions: <ul style="list-style-type: none"> <li>Must provide the Latest version of Hardware and software/patch.</li> <li>Storage system management must be on-premises based without any internet dependencies.</li> </ul>
9	Page no: 12 Throughput	Option-1: 5.0 Gbps (NAS) (70% Read, 30% Write, 256KB block size) Option-2: 5.0 Gbps (NAS) (70% Read, 30% Write, 256KB block size)	Option-1: Min. 40 Gb/s NAS (70% Read, 30% Write, 32KB or 256KB block size) Option-2: Min. 40 Gb/s NAS (70% Read, 30% Write, 32KB or 256KB block size)
10	Page no: 12 IOPS and latency	Min. 500K IOPS and latency would be less than 500 $\mu$ s. for Option-1 and Option-2 (SAN) (70% Read, 30% Write, 8KB block size)	Min. 300K IOPS and latency would be less than 1 ms. for both option-1 and option-2 (SAN) (70% Read, 30% Write, 8KB block size)
12	Page no: 12 Cache	Option-2: Total 1.5 TB dedicated DRAM cache for SAN (Min 2 controller) and Total 1 TB dedicated DRAM cache for NAS (Min 2 controller).	Option-2: Total 1 TB dedicated DRAM cache for SAN (Min 2 controller) and Total 1 TB dedicated DRAM cache for NAS (Min 2 controller).
15	Page no: 12 Protocol Support	The offered storage array shall support all widely recognized protocols, including Fibre Channel (FC), NVMe over FC/TCP, iSCSI, SMB 3.1.1, NFS v4.1, NFSv3, NFSv2, FTP/FTPS, and REST over HTTP. The proposed array must also support block, file, and object storage protocols. Additionally, native support for NVMe-oF and RoCEv2/NVMe over TCP must be available from Day One.	The offered storage array shall support all widely recognized protocols, including Fibre Channel (FC), NVMe over FC/TCP, iSCSI, SMB 3.1.1, NFS v4.1, NFSv3, NFSv2 and REST over HTTP. The proposed array must also support block, file, and object storage protocols. Additionally, native support for NVMe-oF RoCEv2 or NVMe over TCP must be available from Day One.
19	Page no: 13 RAID	a. 8 TB x 24 Disk (maximum) + 2 Parity+ Hot Spare /RAID group. or 16TB x 16 Disk (maximum) + 2 Parity+ Hot Spare /RAID group. Maximum Hot Spare Drives will get preference.  c. Offered storage Should Support expansion of 25NVMe disk per controller.	a. If 8 TB (maximum) x 24 Disk (maximum) + 2 Parity+ Hot Spare /RAID group or If 16TB (maximum) x 16 Disk (maximum) + 2 Parity+ Hot Spare /RAID group. Maximum Hot Spare Drives will get preference.  c) Offered storage Should Support expansion with additional 25 NVMe disk per controller.
21	Page no: 13	Must support Global and inline De-duplication	Must support Global or inline De-duplication

	Deduplication	with optional post-process optimization.	with optional post-process optimization. All necessary licenses should be provided by the bidder from day 1.
<b>High Availability, Redundancy, and Power Failure Resilience:</b>			
25	Page no: 13 Enclosure and Port-Level Failover	<ul style="list-style-type: none"> <li>The architecture must tolerate complete enclosure, drive shelf, or back-end path failure while maintaining full data accessibility.</li> <li>The system must support automatic failover of front-end ports (FC/iSCSI) experiencing physical disconnection or cable failure, without manual intervention or reliance on host-based multi-pathing software.</li> </ul>	<ul style="list-style-type: none"> <li>The architecture must tolerate drive shelf, or back-end path failure while maintaining full data accessibility.</li> <li>The system must support automatic failover of front-end ports (FC/iSCSI) experiencing physical disconnection.</li> </ul>
26	Page no: 14 Guaranteed Availability and Resilience	<ul style="list-style-type: none"> <li>Must offer 99.999% or higher availability with architectural design for no service disruption during component failure, upgrades, or maintenance.</li> <li>Must support hot-plugging and hot-swapping of critical components without disruption (i.e. processors, disk drives, controllers, fans, power supplies and enable non-disruptive online micro-code upgrades)</li> </ul>	<ul style="list-style-type: none"> <li>Must offer 99.999% or higher availability with architectural design for no service disruption during component failure, upgrades, or maintenance.</li> <li>Must support hot-plugging and hot-swapping with critical components i.e. disk drives, fans, power supplies and enable non-disruptive online micro-code upgrades</li> </ul>
<b>FRONT-END &amp; BACK-END CONNECTIVITY &amp; PROTOCOL SUPPORT (PER CONTROLLER)</b>			
34	Page no: 15 Fiber Channel (FC)	Min. 4x 64 or 8x32 Gbps SFP+native Fiber Channel ports/ controller. Multipath I/O; backward compatible with 32/16Gb FC. Must be provided required number of Back-end ports for connecting of disk enclosures of 1 PB capacity from day 1 with Direct method to ensure no data loss in the event of failure of any one of the controllers.	<b>Remain unchanged (64 Gbps preferable)</b>
35	Page no: 15 NVMe over TCP &RoCE v2	Min. 4x 100 Gbps QSFP28 ports per controller. Support TCP & RoCE v2 on same port via VLAN or traffic class mapping.	Min. 2x 100 Gbps QSFP28 ports per controller. Support TCP and RoCE v2 on same port via VLAN or traffic class mapping.
36	Page no: 15 NAS (NFS v3/v4, SMB 3.x)	Min. 4x 25/40/100 Gbps QSFP+/QSFP28/QSFP56 auto negotiable ports per controller Compatible with 25/40/100GbE Ethernet switches.	Min. 2x100 Gbps with QSFP28 transceiver per controller. Compatible with 40/100GbE Ethernet switches.
37	Page no: 15 Object Storage	<ul style="list-style-type: none"> <li>Cloud-native file/object access is Optional.</li> <li>Min. 4x 25/40/100Gbps auto negotiable ports per controller or shared with NAS.</li> <li>Can share with NAS or use logical separation (VLANs).</li> </ul>	Object Storage is optional requirement for Unified storage (option:1) <b>and</b> not applicable for Purpose-built (option:2)
38	Page no: 15 Management	<ul style="list-style-type: none"> <li>Min. 1x 10/25 Gbps Storage management interface</li> </ul>	<ul style="list-style-type: none"> <li>Min. 1x 1 Gbps Storage management interface.</li> </ul>

39	Page no: 15 General Requirements and Notes	Technical Specification mentioned in Tender Schedule.	Remain unchanged for Unified storage (option:1) and not applicable for Purpose-built storage (option:2)
<b>Block / SAN FEATURES</b>			
40	Page no: 15 LUN Services	Thin & Thick provisioning, LUN cloning, expansion, snapshots, vVols, QoS per LUN	Thin provisioning, LUN cloning, expansion, snapshots, vVols, QoS per LUN
<b>File / NAS FEATURES</b>			
45	Page no: 16 Share Types	NFS v3/v4.1, SMB 2.1/3.0, FTP/SFTP	NFS v3/v4.1, SMB 2.1/3.0
48	Page no: 16 Snapshot & restore	File and share-level snapshots, auto-schedule, and point-in-time recovery.	File or share-level snapshots, auto-schedule, and point-in-time recovery.
<b>OBJECT STORAGE OPTIONAL FOR BOTH UNIFIED AND PURPOSE-BUILT STORAGE SYSTEM</b>			
54	Page no: 16 Access Method	Technical Specification mentioned in Tender Schedule.	Remain unchanged for Unified storage (option:1) and not applicable for Purpose-built storage (option:2)
55	Page no: 16 Bucket Features		
56	Page no: 16 Security		
57	Page no: 16 Performance		
58	Page no: 16 Application Use		
83	Page no: 18 Training & Knowledge sharing	<ol style="list-style-type: none"> <li>No. of participants: 6</li> <li>OEM authorized Trainer:</li> <li>OEM authorized Training institute:</li> <li>Training on Implementation, operation and Support</li> <li>Training contents: Duration-5 days with theory and lab</li> </ol>	<ol style="list-style-type: none"> <li>No. of participants: 6</li> <li>OEM authorized Trainer:</li> <li>OEM authorized Training institute:</li> <li>Training Location: Local/Foreign (please mention location)</li> <li>Training on Implementation, operation and Support</li> <li>Training contents: Duration-5 days with theory and lab</li> </ol>

**Table-C: HBA card (Quantity- 10) & FC cable (Quantity-20)**

Ex. Sl. no.	Name of Item with page no	Existing Technical Specification as per Tender Schedule	Amendments
7	Page no: 19 Server Brand & Model	Compatible HBA cards for the existing (as mentioned Brands) Server would be required.	<ol style="list-style-type: none"> <li>Dell R740, R740xd, R750</li> <li>HPE Proliant 360, 380</li> </ol>





**Table-D: NOF (NVMe-oF Ethernet) Switch**

Ex. Sl. no.	Name of Item with page no	Existing Technical Specification as per Tender Schedule	Amendments
8	Page no: 19 CPU Memory	Quad-core ARM or x86 CPU, 16GB RAM, 32GB internal SSD/eMMC	Min. Quad-core ARM or x86, 8GB RAM, 4GB internal SSD/eMMC.

**General terms & conditions:**

Ex. Cl. No.	Clause Name with page no	Existing conditions as per Tender Schedule	Amendments
28.0	Page No: 10 THE EVALUATION AND COMPARISON OF BIDS <b>Stage-1:</b> VALIDATION OF BIDDER'S ELIGIBILITY/RATING:	<b>a.</b> The proposed Storage system should have been implemented by the OEM/ ASP at least 02 (two) domestic organization. (02 marks for 02 & 05 marks for 03 or higher installation). Completion of the Proof of Concept (POC) will not be treated as experience of the bidder.  Note: Copy of work order, commissioning certificate etc. with relevant information.	<b>a.</b> The proposed Storage system should have been implemented by the OEM/ ASP at least 03 (three) domestic organization. (08 marks for 03 & 10 marks for 04 or higher installation). Completion of the Proof of Concept (POC) will not be treated as experience of the bidder.  Note: Copy of work order, commissioning certificate etc. with relevant information.
		<b>g.</b> Experience for supplying and implementing proposed Storage system in financial institutions (Bank and non-bank FI) including Telco and Corporate Organization in Bangladesh during the last 05 years. Each institution score will be 1 and maximum 7 for 7 or more institutes.	<b>g.</b> Experience for supplying and implementing proposed / equivalent Storage system in financial institutions (Bank and non-bank FI) including Telco and Corporate Organization in Bangladesh during the last 05 years. Each institution score will be 1 and maximum 7 for 7 or more institutes.
		<b>i.</b> Bidder's Performance record of the supplied equipment at IBB PLC during last 10 years (5 marks for good, 3 marks for satisfactory & 2 marks for average) and reputation of after sale service with IBB PLC for the last 10 years (5 marks for good, 3 marks for satisfactory & 2 marks for average).	<b>i.</b> Bidder's Performance record of the supplied equipment at IBBPLC, Bank and Non-Bank FI, Telco and Corporate Organization in Bangladesh during last 10 years (Highest record will get 10 marks and other will get proportionate marks).
4.0	Page no: 4. Tender Preparation	The earnest money/bid security should be @ 2½% of total Tender value and be issued in favor of "Islami Bank Bangladesh PLC" in the form of Pay Order/Demand Draft/Bank Guarantee	The earnest money/bid security of Tk.20,00,000/- (Taka twenty lakh) only issued in favor of "Islami Bank Bangladesh PLC" in the form of Pay Order / Demand Draft / Bank Guarantee.

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### Amendment Summary of Financial offer

- Financial offer would be submitted & quoted as per following information (Detailed BOQ/BOM with SKU or Part number must be included with the Technical Proposal for all Items dependent with price)
- Storage Software License should be any type of restriction free for 600 TB in Datacenter and 600 TB for DRS.
- The bidder must submit an **architectural design** of the proposed storage solution, including the additional components offered. The design should clearly demonstrate how **high availability** will be ensured, along with the **DC-DR deployment architecture**.
- The bidder must provide a **detailed calculation of IOPS and throughput**.
- The **RFP Technical Compliance Sheet** must be verified by the **OEM**, and the bidder must provide references from the **technical datasheet** of the proposed solution.

Sl.	Name of Item	Qty. (Unit)	Remarks	Unit Price (Tk.)	Total price (Tk.)
1	Storage system: Considering technical spec, implementation and data migration from existing to new storage system) <b>Option-1: Unified Storage System</b>	<b>DC: 1 Unit</b> <b>DR: 1 Unit</b>	As per Table-A		
	<b>Option-2: Purpose-built Storage System</b>	<b>DC: Block-1 Unit &amp; File: 1 Unit</b> <b>DR: Block-1 Unit &amp; File: 1 Unit</b>			
2	SAN Switch as per technical specifications.	48 ports: 2 units	As per Table-B		
		24 Port: 2 units			
3	HBA card as per technical specifications.	10	As per Table-C		
4	NVMe-oF Ethernet Switch	24 ports: 2 units	As per Table-D		
5	Training	1 Lot	As per Table- A: Point No- 83 (page no-18)		
<b>Grand Total (Tk.)</b>					
6	AMC after expiry of warranty period per year for storage system including related peripherals, service, software, hardware etc.	1 Lot	AMC for 2 Years. (Health check, patching, maintenance, upgradation, etc.)		
7	Capacity Up-gradation with License of the Storage System within/ after expiry of the <b>warranty (per 50 TB, 100 TB) for PCIE NVMe SSD including all required license.</b>	50TB	Including all software and AMC		
		100 TB			
8	Additional Controller Price	2 Units	For future upgradations		
<b>All other terms &amp; Conditions of Tender Schedule shall remain unchanged.</b>					

  
PO (ICTPD, CPD)

  
SPO (ICTPD, CPD)

  
FAVP (ICTPD, CPD)