



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.

General Specifications:

| 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"> • Must provide the Latest version of Hardware and software/patch. • Storage system management must be on-premises based without any internet dependencies. |
| 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 μ 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 |

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| | Deduplication | with optional post-process optimization. | with optional post-process optimization. All necessary licenses should be provided by the bidder from day 1. |
|--|---------------|--|--|

High Availability, Redundancy, and Power Failure Resilience:

| | | | |
|----|---|--|--|
| 25 | Page no: 13 Enclosure and Port-Level Failover | <ul style="list-style-type: none"> The architecture must tolerate complete enclosure, drive shelf, or back-end path failure while maintaining full data accessibility. 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. | <ul style="list-style-type: none"> The architecture must tolerate drive shelf, or back-end path failure while maintaining full data accessibility. The system must support automatic failover of front-end ports (FC/iSCSI) experiencing physical disconnection. |
| 26 | Page no: 14 Guaranteed Availability and Resilience | <ul style="list-style-type: none"> Must offer 99.999% or higher availability with architectural design for no service disruption during component failure, upgrades, or maintenance. 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) | <ul style="list-style-type: none"> Must offer 99.999% or higher availability with architectural design for no service disruption during component failure, upgrades, or maintenance. 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 |

FRONT-END & BACK-END CONNECTIVITY & PROTOCOL SUPPORT (PER CONTROLLER)

| | | | |
|----|---|---|--|
| 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. | Remain unchanged (64 Gbps preferable) |
| 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"> Cloud-native file/object access is Optional. Min. 4x 25/40/100Gbps auto negotiable ports per controller or shared with NAS. Can share with NAS or use logical separation (VLANs). | Object Storage is optional requirement for Unified storage (option:1) and not applicable for Purpose-built (option:2) |
| 38 | Page no: 15 Management | <ul style="list-style-type: none"> Min. 1x 10/25 Gbps Storage management interface | <ul style="list-style-type: none"> Min. 1x 1 Gbps Storage management interface. |

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| 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) |
| Block / SAN FEATURES | | | |
| 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 |
| File / NAS FEATURES | | | |
| 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. |
| OBJECT STORAGE OPTIONAL FOR BOTH UNIFIED AND PURPOSE-BUILT STORAGE SYSTEM | | | |
| 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"> No. of participants: 6 OEM authorized Trainer: OEM authorized Training institute: Training on Implementation, operation and Support Training contents: Duration-5 days with theory and lab | <ol style="list-style-type: none"> No. of participants: 6 OEM authorized Trainer: OEM authorized Training institute: Training Location: Local/Foreign (please mention location) Training on Implementation, operation and Support Training contents: Duration-5 days with theory and lab |

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"> Dell R740, R740xd, R750 HPE Proliant 360, 380 |

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. |

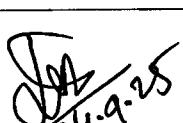
General terms & conditions:

| 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 Stage-1: VALIDATION OF BIDDER'S ELIGIBILITY/RATING: | <p>a. 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.</p> <p>Note: Copy of work order, commissioning certificate etc. with relevant information.</p> <p>g. 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.</p> <p>i. 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).</p> | <p>a. 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.</p> <p>Note: Copy of work order, commissioning certificate etc. with relevant information.</p> <p>g. 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.</p> <p>i. 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).</p> |
| 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. |

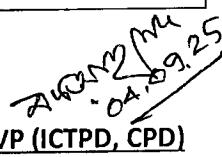
Amendment Summary of Financial offer

- 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) | DC: 1 Unit DR: 1 Unit | As per Table-A | | |
| | Option-1: Unified Storage System | | | | |
| 2 | SAN Switch as per technical specifications. | DC: Block-1 Unit & File: 1 Unit | As per Table-B | | |
| | | DR: Block-1 Unit & File: 1 Unit | | | |
| 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) | | |
| Grand Total (Tk.) | | | | | |
| 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 warranty (per 50 TB, 100 TB) for PCIE NVMe SSD including all required license. | 50TB | Including all software and AMC | | |
| | | 100 TB | | | |
| 8 | Additional Controller Price | 2 Units | For future upgradations | | |
| All other terms & Conditions of Tender Schedule shall remain unchanged. | | | | | |


PO (ICTPD, CPD)


SPO (ICTPD, CPD)


FAVP (ICTPD, CPD)