ISLAMI BANK BANGLADESH PLC.
OPERAIONS WING
PROCUREMENT OF COMPUTER HARDWARE
AND ACCESSORIES DEPARTMENT (PCHAD)
20, DILKUSHA C/A (9th Floor), DHAKA – 1000.

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

Technical Instruction:

Item A: Storage System (Quantity – 02)

Ex. SL No.	Name of Item or Related Service with page no/Annexure	Existing Technical Specification as per Tender Schedule	Amendments
5	Page no: 16/ Annexure- I Usable Capacity Requirements	b. Disk: 100% PCIe NVME (Mixed Mode / Mixed Use) with minimum 3.0TB & Maximum 8.0 TB Capacity of disk be used for better safeguard in terms of disk failure. c. The Raid must be configured with minimum **dual parity** with required hot spares drives combining **10D** (maximum) + 2P (minimum) e. The capacity should be upgradable up to min. 1.0 Peta Byte.	b. Disk: 100% PCIe NVME SSD 3.0 (at least) with minimum 3.0 TB & Maximum 8.0 TB Capacity of disk be used for better safeguard in terms of disk failure. c. The Raid must be configured with minimum dual parity with required hot spares drives combining 24D (maximum) + 2P (minimum). e. The capacity should be upgradable up to min. 1.0 Peta Byte without compromising the overall performance.
6	Page no: 16/ Annexure- I Storage controller Architecture	b. **Controller:** Industry standard Intel Processor & minimum 2 Controller (active - active for both SAN & NAS) without compromising the capacity of any failure of controller or Minimum 4 Controllers (2 Controllers active-active for SAN & 2 Controller active-active for NAS) without compromising the capacity & performance of any failure of one/ two controller ensuring redundant / load sharing, availability / performance, maintenance etc. d. **Cache:** Minimum 01TB of total/ Global cache should be provided and each SAN controller shall have required cache in such a way that total / global cache should not be decreased from 1TB in case of any failure of one or two controller.	b. **Controller:** Minimum 2 Controller (active - active for both SAN & NAS) without compromising the capacity of any failure of controller or Minimum 4 Controllers (2 Controllers active-active for SAN & 2 Controller active-active for NAS) without compromising the capacity & performance of any failure of one/ two controller ensuring redundant / load sharing, availability / performance, maintenance etc. d. **Cache:** Minimum 01TB (DRAM Dedicated) of total/ Global cache should be provided and each SAN controller shall have required cache in such a way that total / global cache should not be decreased from 1TB in case of any failure of one or two controller. **Note:** Any Cache from flash storage will not be accepted.
8	Page no: 17/ Annexure- I Protocols supported	Offered Storage array shall support all well-known protocols like FC, iSCSI, FCoE, SMB 3.1.1, NFS V4, FTP/FTPS, REST over HTTP etc.	Offered Storage array shall support all well-known protocols like FC, iSCSI, SMB 3.1.1, NFS V4, FTP/ FTPS, REST over HTTP etc.
9	Page no: 17/ Annexure- I Intermix of Disks	The storage should be preferred an intermix of NVMe,SSD, SAS, NL-SAS.	**Remove/ delete**
10	Page no: 17/ Annexure- I Front and Back end ports	a. Offered Storage array should be provided with spare/ extra ports for minimum double of required 32Gbps (min.) FC port with module and 10Gbps (min.) Ethernet port with module.	a. Offered Storage array should be provided with min. 4 FC ports per controller with 32Gbps (min.) & module and min. 8 Ethernet ports with 10/25Gbps (min.) & module per controller.

		b. Offered Storage array system shall be supplied with four additional native IP ports (10Gbps min. for storage based **replication** (both sync and async.) c. Offered storage shall have required number of Back-end ports with min. 12Gbps SAS /FC for connecting disk enclosure with Direct method /daisy chain to ensure no data / Disk loss in the event of failure of any one of the controller. Number of port should be mentioned.	b. Offered Storage array system shall be supplied with four additional native IP ports (10/ 25Gbps) min. for storage-based replication (both sync and async.). c. Offered storage shall have required number of Back-end ports & devices with sufficient capacity to accommodate 1 PB (min.) of storage near future. At least 25GBps NVMe-oF for connecting disk enclosure with controller / enclosure through Direct method/ daisy chain to ensure no data / Disk loss in the event of failure of any one of the controller/ disk enclosure/ disks. Number of ports should be mentioned clearly.
13	Page no: 17/ Annexure- I High availability Features	b. The storage array should provide with such a design where storage should have data availability even in entire drive-Chassis failure.	b. The storage array should provide with such a design where storage should have data availability even in single drive-Chassis/ array/ enclosure failure.
17	Page no: 18/ Annexure- I Tiering	a. The Storage System should be configured for Tiering of Data at LUN and Sub LUN level for higher performance required out of SSD drives/ Including SSD drives. b. Should be able to AST (Automated Storage Tiering) / FAST (Fully Automated Storage Tiering) with all the tiers.	**Remove/ delete**
18	Page no: 18/ Annexure- I Management Software functionality / features with licenses	b. Multi tenancy, Thin provision, Automated Storage Tiering, Snapshot, copy, clone, De-duplication, Compression, Replication (both Sync and Async), Integration with VMware, Hyper-v, Container platform, Multipathing, Quality of services (Qos), Performance Monitoring, reporting, Online Raid Migration, Online data migration, Online Volume conversion (thin to thin compressed, thin to thin de-dup etc.), Antivirus for NAS, Authentication sever (AD/LDAP), Virtual server provisioning, SNMP configuration, Notification and alert services, Flash cache and File services etc. All required licenses should be perpetual / unlimited in the name of the Bank.	**b.** Multi tenancy, Cloud ready/ ready (to connect with on prem-private cloud using vmware/ openstack/ neutanix/ openshift), Thin provision, Snapshot, copy, clone, De-duplication, Compression, Replication (both Sync and Async), Integration with VMware, Hyper-v, Container platform, Multipathing, Quality of services (Qos), Performance Monitoring, reporting, Online Raid Migration, Online data migration, Online Volume conversion (thin to thin compressed, thin to thin de-dup etc.), Antivirus for NAS, Authentication sever (AD/LDAP), Virtual server provisioning, SNMP configuration, Notification and alert services, Flash cache and File services etc. All required licenses should be perpetual / unlimited in the name of the Bank.
23	Page no: 19/ Annexure- I Monitoring and analytics engine	Cloud Enabled Monitoring and analytics engine shall have capability to provide following: a. Providing Firmware upgrade and patch upgrade recommendations proactively. b. Providing historical capacity and performance trend analysis. c. Shall provide history of support cases logged with Support team under different column like Critical, Normal and low severity along with closed cases. Cloud monitoring tool shall be able to provide the complete month-wise breakup. d. A Complete connectivity map starting from controller to back-end disks. e. Shall be able to provide the executive Dashboard covering various critical and must aspects of Total Capacity, overall health / wellness score of array. De-duplication and compression ratio, over-all front-end	Cloud Enabled Monitoring and analytics engine shall have capability to provide following: a. Providing Firmware upgrade and patch upgrade recommendations proactively. b. Providing historical capacity and performance trend analysis. c. Shall provide history of support cases logged with Support team under different column like Critical, Normal and low severity along with closed cases. Cloud monitoring tool shall be able to provide the complete month-wise breakup. d. A Complete connectivity map starting from controller to back-end disks. e. Shall be able to provide the executive Dashboard covering various critical and must aspects of

		performance etc. Cloud enabled monitoring and analytics engine integration with Hypervisor: f. Offered Cloud enabled monitoring and analytics engine shall be tightly integrated with Hypervisor layer and shall be certified to work with at-least VMware. g. Hypervisor integration shall be able to provide end to end monitoring of hypervisor Datacenter, Data-store, Hypervisor Host and VMs running within the hypervisor datacenter and shall be able to link with offered storage array. h. Cloud monitoring and integration tool shall provide the detailed analysis of CPU Contention, Memory contention, IO contention for each VM – including the latency. i. Cloud monitoring and integration tool shall have capability to identify the top VMs which are contributing towards maximum IOs and Latency.	Total Capacity, overall health / wellness score of array. De-duplication and compression ratio, over-all front-end performance etc. Cloud enabled monitoring and analytics engine integration with Hypervisor:
24	Page no: 19/ Annexure- I Rack Accessories	Should be provided same brand factory-integrated 42U Rack system with accessories: vertical PDUs, grounding kit, side panels, baying, ballasting kit, door kit etc.	Should be provided with same brand factory-integrated 42U Rack system with required accessories (vertical PDUs, grounding kit, side panels, baying, ballasting kit, door kit etc.).
26	Page no: 20/ Annexure- I Capacity enhancement	Enhancement of the storage @100TB would be added remain unchanged of any items of the system without compromising its performance in all respect. Price of additional enhancement @100TB should be mentioned in financial offer.	Enhancement of the storage @100TB Usable capacity using the same capacity drives and RAID as offered would be added remain unchanged of any items of the system without compromising its performance in all respect. Price of additional enhancement @100TB should be mentioned in financial offer

Item B: SAN Switch (Quantity-04)

Ex. SL No.	Name of Item or Related Service with page no/Annexure	Existing Technical Specification as per Tender Schedule	Amendments
2	Page no: 21/ Annexure- I **Model**	Should be mentioned by bidder	Should be mentioned by bidder (Offered switch model must be latest generation and must be ensured its lifetime at least 05 years).
7	Page no: 21/ Annexure- I Port Speed	8, 16 or 32 Gbps speed for all ports (Auto-sensing)	Min. 8/16/32 Gbps speed for all ports (Auto-sensing).
10	Page no: 21/ Annexure- I High Availability	Should provide enterprise-class availability features such as redundant and hot pluggable components like power supply and FAN.	Switch shall support POST and online/ offline diagnostics, including RAS trace logging, environmental monitoring, non-disruptive daemon restart, FC ping and Path info (FC traceroute) and any other features should be mentioned by the bidder.
15	Page no: 21/ Annexure- I Warranty	05 years full warranty (all parts replacement along with update/ upgrade of software/ patches and 24x7 service) from Manufacturer and bidder should submit the OEM provided part number against the support requirement.	05 years' full warranty (all parts replacement along with update/ upgrade of software/ patches facility for at least 07 years) from Manufacturer and bidder should submit the OEM provided part number against the support requirement. OEM must maintain a local part depot center in Bangladesh..

Item C & D: HBA card (Quantity- 10) & FC cable (Quantity-20)

Ex. Sl. no.	Name of Item or Related Service with page no/Annexure	Existing Technical Specification as per Tender Schedule	Amendments
7	Page no: 22/ Annexure- I Server Brand & Model	Dell (R730-750), HPE (Proliant 350, 380), CISCO (C-240)	Compatible HBA cards for the existing (as mentioned Brands) Server would be required.

General Instruction:

Ex. Cl. No.	Clause Name with page no/Annexure	Existing conditions as per Tender Schedule	Amendments
4.0	Page No: 06, Availability of Tender Schedule (4.2)	The tender schedule available at Procurement of Computer Hardware & Accessories Department (PCHAD), Operations Wing (OW), IBB PLC, H.O., Yousuf Chamber (9th Floor), 20, Dilkusha C/A, Dhaka during office hours from **15.01.2024 to 13.02.20224** on payment of Tk. 10,000/- only (non refundable) per set in cash	The tender schedule available at Procurement of Computer Hardware & Accessories Department (PCHAD), Operations Wing (OW), IBB PLC, H.O., Yousuf Chamber (9th Floor), 20, Dilkusha C/A, Dhaka during office hours from **15.01.2024 to 27.02.20224** on payment of Tk. 10,000/- only (non refundable) per set in cash
4.0	Page No: 06, Tender Submission (4.3)	The tender documents shall be dropped in the tender box to be kept at Procurement of Computer Hardware & Accessories Department (PCHAD), Operations Wing (OW), IBBPLC, H.O., Yousuf Chamber (9th Floor), 20, Dilkusha C/A, Dhaka within **03:00 P.M on 14.02.2024**	The tender documents shall be dropped in the tender box to be kept at Procurement of Computer Hardware & Accessories Department (PCHAD), Operations Wing (OW), IBBPLC, H.O., Yousuf Chamber (9th Floor), 20, Dilkusha C/A, Dhaka within **03:00 P.M on 28.02.2024**
19.0	Page No: 11, Delivery	The delivery period shall be maximum 90 calendar days from the date of issuing/ accepting of award letter. Complete delivery of each item at the buyer's premises (i.e. Data Centre-Dhaka & DRS-Rajshahi of IBB PLC and verification will be done through the concerned team at the respective locations) shall be made within this specified period at the supplier's cost	The delivery period shall be maximum **120 calendar days** from the date of issuing/ accepting of award letter. Complete delivery of each item at the buyer's premises (i.e. Data Centre-Dhaka & DRS-Rajshahi of IBB PLC and verification will be done through the concerned team at the respective locations) shall be made within this specified period at the supplier's cost
20.0 & Form-1	Page No: 11 & 26, Completion period & BID FORM	The delivery, installation and full commissioning of the system/ solution shall have to be completed within a period of **90 (ninety)** calendar days from the date of Work Order.	The delivery, installation and full commissioning of the system/ solution shall have to be completed within a period of **120 (one hundred twenty)** calendar days from the date of Work Order.
21.0	Page No: 12, Penalty	If the supplier fails to supply the required Storage system and commission the same in the stipulated time as per tender schedule, the buyer reserves the right to impose penalty which may be @1% of the contract value per week after the dead line. Upon reaching the penalty to 10% of the contract price that is after 10 weeks, the security money/earnest money will be forfeited on sending a letter to the contractor.	If the supplier fails to supply the required Storage system and commission the same in the stipulated time as per tender schedule, the buyer reserves the right to impose penalty which may be @0.5% of the contract value per week after the dead line. Upon reaching the penalty to 5% of the contract price that is after 10 weeks, the security money/earnest money will be forfeited on sending a letter to the contractor.
Table-2	Page No: 14, Criteria (iv)	The OEM/ ASP's – (i)Presence of Technical Assistance Centre (TAC) and Centre of Excellence (CoE) with R&D facility in **South East Asia** – will get 02 mark; Presence of own/ ASP technical resources at Dhaka / Bangladesh– will get 03 marks.	The OEM/ ASP's – (i)Presence of Technical Assistance Centre (TAC) and Centre of Excellence (CoE) with R&D facility **in Southeast Asia/APAC**– will get 02 mark; Presence of own/ ASP technical resources at Dhaka / Bangladesh– will get 03 marks.

Summary of Financial offer

Adding:

Summary of Training Cost as per Tender Schedule

SL	Description of Training	Total Price (Tk.)
A	Training (Local)- 05 persons as per tender schedule (training in Broad Scope of Work).	
	OR	
B	Training (Foreign)- 05 persons as per tender schedule (training in Broad Scope of Work).	

13.02.24 13.02.24 13.02.2024 13/2/2024

SO (PCHAD, OW) SPO (PCHAD, OW) FAVP (PCHAD, OW) AVP & Head of PCHAD, OW