Establishment & General Services Division, BCBL, Head Office,

Eunoos Trade Center, Level-22, 52-53, Dilkusha, Dhaka.

Invitation for Tender

01.	Agency	Bangladesh Commerce Bank Limited
02.	Procuring Entity Name	Bangladesh Commerce Bank Limited, Estt & GSD Division, Head Office, Dhaka
03.	Procuring Entity District	Dhaka, Bangladesh
04.	Invitation Ref No	Tender # *2021/03*
05.	Date	17/08/2021
06.	Procurement Method	Limited Tendering Method
07.	Budget and Source of Fund	Own source of BCBL
08.	Tender Package Name	*About Purchasing necessary hardware items for implementing interoperable Digital Transaction Platform (IDTP)*
09.	Tender Publication Date	17/08/2021.
10.	Tender last selling date	31/08/2021 .
11.	Tender closing date & time	05/09/2021, 1.00 PM
12.	Tender opening date & time	05/09/2021, 3.30 PM
13.	Name & Address of Selling Tender Document	Establishment & General Services Division, BCBL, Head Office, Eunoos Trade Center, Level-22, 52-53, Dilkusha, Dhaka.
	Address of Receiving Tender Document	Establishment & General Services Division, BCBL, Head Office, Eunoos Trade Center, Level-22, 52-53, Dilkusha, Dhaka. & etender & etender@bcbl.com.bd Tender last receiving Date & Time: 05/09/2021, 1.00 PM.
	Address of Opening Tender Document	Mini Conference Room, BCBL, Head Office, Eunoos Trade Center, Level-22, 52-53, Dilkusha, Dhaka.

INFORMATION FOR TENDERER

14.	Eligibility of Tenderer	As per Tender Document.
15.	**Brief Description of Goods**	
	About Purchasing necessary hardware items for implementing interoperable Digital Transaction Platform (IDTP)	

PROCURING ENTITY DETAILS

16.	Name of Official Inviting Tender	Nazim Anwar
17.	Designation of Official Inviting Tender	Senior Asst. Vice President
18.	Address of Official Inviting Tender	Establishment & General Services Division, BCBL, Head Office, Eunoos Trade Center, Level-22, 52-53, Dilkusha, Dhaka.
19.	Contact details	02-47111036
20.	The procuring entity reserves the right to accept or reject any or all tenders (partly or fully) at any stage.	

Nazim Anwar
Senior Asst. Vice President

Server & HSM specifications for IDTP project

Role	Server Spec	Quantity

ICP	**Server Brand:** Dell
	Model: R740
	
	CPU : 2x Intel Xeon Silver 4216 2.1GHz,16-Core or equivalent CPU
	
	Memory:
	512 GB (16 x 32 GB Module) 3200MT/s, Dual Rank, x8 Data Width The system should support maximum 1.0 TB DDR4 memory(24 slots).
	
	Storage: 4 x 800GB SSD SAS 12Gbps HDD
	
	Networking :
	1 x DP 10G Base-T+ DP 1G Base-T, rNDC
	1 x DP 10G Base-T Adapter
	Other:
	i) RAID Controller, 8GB Nvcache
	ii) Redundant Hot plug Power Supply support
	iii) Remote management feature via dedicated remote management port True agent-free monitoring independent of OS Server should send an alert notification on the system front panel for failure of any component like Processors, voltage regulator modules (VRMs),memory, power supplies, fans, HDDs, adapters and system temperature which will allow system administrator to identify the component failure Supports automated governing of part's firmware level through the Lifecycle controller's policy. All remote management features should be available from day one.
	iv) Minimum 6 PCI Express slots)
	   ➤ One x16 full-length, full-height
	   ➤ Three x8 full-length, full-height
	   ➤ Three x8 half-length, half-height
	v) 2U Rack mountable with Rail Kit and cable management arm
	vi) 03 Years Full Warranty from OEM including hardware & software with spare Parts. The OEM should have own logistics facility/warehouse in Dhaka.
		2x for redundancy

| ICP DB & Logs | **Server Brand:** Dell
Model: R740

CPU :2 x Intel® Xeon® Gold 6252 2.1G, 24CoreCore or equivalent CPU

Memory:
768 GB (24 x 32 GB Module) 3200MT/s, Dual Rank, x8 Data Width   The system should support maximum 1.0 TB DDR4 memory(24 Slots).

Storage:
  i) 4 x 1.9 TB SSD SAS Mix use 12Gbps 512n 2.5in Hot-plug Drive, min. performance 3 DWPD, 10512 TBW and 2.5 inch drive bay supported.

  ii) 10 x 1.9 TB SSD SAS Read Intensive 12Gbps 512n 2.5in Hot-plug Drive, min. performance 1 DWPD,3504 TBW Hot-plug Hard Drive 2.5 inch drive bay supported

Networking :
1 x DP 10G Base-T+ DP 1G Base-T, rNDC
1 x DP 10G Base-T Adapter

Other:
  vii) RAID Controller, 8GB Nvcache
  viii) Redundant Hot plug Power Supply support
  ix) Remote management feature via dedicated remote management port True agent-free monitoring independent of OS Server should send an alert notification on the system front panel for failure of any component like Processors, voltage regulator modules (VRMs),memory, power supplies, fans, HDDs, adapters and system temperature which will allow system administrator to identify the component failure Supports automated governing of part's firmware level through the Lifecycle controller's policy. All remote management features should be available from day one.
  x) Minimum 6 PCI Express slots)
     ➤ One x16 full-length, full-height
     ➤ Three x8 full-length, full-height
     ➤ Three x8 half-length, half-height
  xi) 2U Rack mountable with Rail Kit and cable management arm
  xii) 03 Years Full Warranty from OEM including hardware & software with spare Parts. The OEM should have own logistics facility/warehouse in Dhaka. | 1x for logs and local storage
of transactions from Fi perspective |
| | | |

HSM	Thales Luna Network Hardware Security Modules (HSM) A700	1x
	Country of Origin: USA	
	Form factor: 1U	
	Supported Operating Systems:	
	• Windows, Linux, Solaris, AIX	
	• Virtual: VMware, Hyper-V, Xen, KVM	
	API Support	
	• PKCS#11, Java (JCA/JCE), Microsoft CAPI and CNG, Open SSL	
	• REST API for administration	
	Cryptographic:	
	• Full Suite B support	
	• Asymmetric: RSA, DSA, Diffie-Hellman, Elliptic Curve Cryptography (ECDSA, ECDH, Ed25519, ECIES) with named, user-defined and Brain pool curves, KCDSA, and more	
	• Symmetric: AES, AES-GCM, Triple DES, DES, ARIA, SEED, RC2, RC4, RC5, CAST, and more	
	• Hash/Message Digest/HMAC: SHA-1, SHA-2, SHA-3, SM2, SM3, SM4 and more	
	• Key Derivation: SP800-108 Counter Mode • Key Wrapping: SP800-38F	
	• Random Number Generation: designed to comply with AIS 20/31 to DRG.4 using HW based true noise source alongside NIST 800-90A compliant CTR-DRBG	
	• Digital Wallet Encryption: BIP32	
	5G Cryptographic Mechanisms for Subscriber Authentication: Milenage, Tuak, and COMP128	
	Security Certifications:	
	• FIPS 140-2 Level 3 – Password	
	• Common Criteria EAL4+ (AVA_VAN.5 and ALC_FLR.2) against the Protection Profile EN 419 221-5	
	• Qualified Signature or Seal Creation Device (QSCD) listing for eIDAS compliance Singapore NITES Common Criteria Scheme	

Seen
16/08/2021
MD. SARWAR MAHMUD
AVP & Divisional Head
Automated Clearing House Division
Bangladesh Commerce Bank Limited
Head Office, Dhaka

Addendum

	An HSM that supports PKCS#11v1.5 industry standard. It should also support the following	

Previous page HSM is also is in Option-1.
 	
Option-1 is for PCI-based HSM
	An HSM that supports PKCS#11v1.5 industry standard. It should also support the following
	1. Secure key storage and operations
	2. Role-based access controls for key management and key usage
	3. Extensive cryptographic capabilities as described below
	    3.1 Hashing (used with HMAC and asymmetric signature) : SHA-1, SHA-256, SHA-384, SHA-512
	    3.2 RSA : 2048, 3072, and 4096 bit keys (PSS & OAEP) – Signing and Decryption
	    3.3 Elliptic Curve Cryptography (ECC) ; Curves: secp224r1, secp256r1, secp256k1, secp384r1, secp521r, bp256r1, bp384r1, bp512r1, curve25519
	    3.4 Key wrap - NIST AES-CCM Wrap at 128, 196, and 256 bits
	    3.5 Random Number generation - seed NIST SP 800-90 AES 256 CTR_DRBG	

Option 2- Technical Specification for USB HSM:

SL No.	Technical Specification	
	Name of Item	**Description**
1	Brand	Yubico
2	Model	YubiHSM2
3	Country of Manufacture	USA/Sweden
4	Cryptographic interfaces	• PKCS#11 API version 2.40 • Key Storage Provider (KSP) to access Microsoft CNG. The KSP is provided as 64-bit and 32-bitDLLs
5	RSA	• 2048, 3072, and 4096 bit keys (with e=65537) • Signing using PKCS#1v1.5 and PSS • Decryption using PKCS#1v1.5 and OAEP
6	Elliptic Curve Cryptography (ECC)	• Curves: secp224r1, secp256r1, secp256k1, secp384r1, secp521r, bp256r1, bp384r1, bp512r1, Ed25519 • Signing: ECDSA (all except Ed25519), EdDSA (Ed25519 only) • Derivation: ECDH (all except Ed25519)
7	Key wrap	Import and export using NIST-approved AES-CCM Wrap with 128, 196, and 256 bit keys
8	Hashing functions	SHA-1, SHA-256, SHA-384, SHA-512
9	Attestation	Asymmetric key pairs generated on-device may be attested

Sarwar
01/09/2018
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Automated Clearing House Division
Bangladesh Commerce Bank Limited
Head Office, Dhaka

Addendum

		using a device-specific HSM attestationkey and certificate, or using own keys and certificates imported into the HSM.
10	Random numbers	On-chip True Random Number Generator (TRNG) used to seed NIST SP 800-90A Rev.1 AES-256CTR_DRBG
11	Storage capacity	• All data stored as objects. 256 object slots, 126KB max total • Stores up to 127 rsa2048 or 93 rsa3072 or 68 rsa4096 or 255 of any elliptic curve type, assuming only one authentication key is present
12	Host interface	Universal Serial Bus (USB) 1.x Full Speed (12Mbit/s) Peripheral with bulk interface
13	Form factor	*nano* designed for confined spaces such as internal USB ports in servers
14	Management	Mutual authentication and secure channel between applications and the HSM
15	Warranty	3 years warranty

The above mentioned servers for 1) ICP, 2) ICP & DB logs is in Lot-1 and HSM is in Lot-2. The bidder can participate in both the Lots together or single Lot also. But the bidder must be from **authorized partner of OEM** of both servers & HSM.

For HSM there are 2 options- Option(1) is for HSM card for PCI-based and Option(2) is for USB HSM. The bidder must submit price quotation for both the HSMs.

Sarwar

07/09/2018

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