Request for Proposal for Supply, Implementation and Maintenance of Hardware Security Modules (HSM) at Bank of Baroda sponsored RRB's Data Centres (Bid Number: GEM/2023/B/3428826 dated 09th May 2023)

Addendum -1 Dated 05th June 2023

Addendum to following Annexure:

1. Section 1.11 – Payment Terms
2. Annexure 12 - A. Brief Description (Scope)
3. Annexure 12 – B. Technical Specification of HSM
4. New (Additional) - Format of Bank Guarantee for early release of retention money

Clarification of Pre-bid queries is enclosed as "Annexure-A".

All other Terms & Conditions are same as per RFP / Bid Number: GEM/2023/B/3428826 dated 09th May 2023 for Supply, Implementation and Maintenance of Hardware Security Modules (HSM) at Bank of Baroda sponsored RRB's Data Centers.

Clause in RFP.

Sr. No.	Existing Clause	Modifications / Changes made to Clause
1	…………………………………….. …………………………………….. **1.11 Payment Terms** …………………………………………. ……………………………………….. The method and conditions of payments to the successful bidder shall be: ➢ 70% of the cost of HSM plus 100% of taxes including GST at actuals after delivery. ➢ 18% of the cost of HSM after one month of successful installation and satisfactory functioning. SNR case - Wherever installation could not be carried out by the successful vendor due to the Bank's dependencies like Site not ready etc. even after 60 days beyond date of delivery then the payment would be released, upon the successful vendor's submission of certificate from location concerned duly signed (with Bank's seal affixed) by the Bank Authority concerned on the Bank's dependencies like site is not ready etc. However, in such a case the successful vendor has to give an undertaking to complete installation within a week of being informed that the site is ready. Payment of 18% of the total cost of HSM after two months post-delivery. ➢ Balance 12% of the cost of HSM would be payable in year 4 and year 5 on submission of satisfactory service report from Bank's project manager. The payment for balance 12% will be divided	…………………………………………………… …………………………………………………… **1.11 Payment Terms** …………………………………………………… …………………………………………………… The method and conditions of payments to the successful bidder shall be: ➢ 70% of the cost of HSM plus 100% of taxes including GST at actuals after delivery. ➢ **20% of the cost of HSM after one month of successful installation and satisfactory functioning or after two months post-delivery in the case of SNR.** SNR case - Wherever installation could not be carried out by the successful vendor due to the Bank's dependencies like Site not ready etc. even after 60 days beyond date of delivery then the payment would be released, upon the successful vendor's submission of certificate from location concerned duly signed (with Bank's seal affixed) by the Bank Authority on the Bank's dependencies like site is not ready etc. However, in such a case vendor has to give an undertaking to complete installation within a week of being informed that the site is ready. Payment of **20%** of the total cost of HSM after two months post-delivery. ➢ **Balance 10% of the total cost of HSM would be payable on completion of 5 years warranty period or against Bank**

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	into four equal instalments for year 4 & year 5 and paid half-yearly in advance from the start of 4th year warranty period.	**Guarantee (BG) in the format enclosed by a scheduled commercial bank in India other than Bank of Baroda. The value of BG should be of an equivalent amount and valid for the period of 63 months.**
	The invoices for claiming the payment should be submitted along with the following documents:	The invoices for claiming the payment should be submitted along with the following documents:
	1 Hardware Payment:	**1 Hardware Payment:**
	A. For 70% Payment Claim	**A. For 70% Payment Claim**
	a) Original delivery challans dully stamped and signed by the Bank Official.	a) Original delivery challans dully stamped and signed by the Bank Official.
	b) Confirmation letter from OEM mentioning the serial number of the HSMs supplied to the Bank are covered under five years back to back warranty support.	b) Confirmation letter from OEM mentioning the serial number of the HSMs supplied to the Bank are covered under five years back to back warranty support.
	c) Complete inventory details including Serial Numbers of the HSM supplied along with all components & licenses (i.e. Operating System etc. if any)	c) Complete inventory details including Serial Numbers of the HSM supplied along with all components & licenses (i.e. Operating System etc. if any)
	B. For 18% Payment Claim	**B. For 20% Payment Claim**
	a) Original Installation Report dully stamped and signed by the Bank Official and by project manager from vendor side.	a) Original Installation Report dully stamped and signed by the Bank Official and by project manager from vendor side.
	b) In Case of SNR - Submission of certificate from location concerned duly signed (with Bank's seal affixed) by the Bank Authority concerned on the Bank's dependencies like site is not ready etc. along with an undertaking from vendor to complete installation within a week of being informed that the site is ready.	b) **Installation Sign-off report and confirmation from Bank officials regarding satisfactory working of HSM** or in case of SNR - Submission of certificate from location concerned duly signed (with Bank's seal affixed) by the Bank Authority on the Bank's dependencies like site is not ready etc. along with an undertaking from vendor to complete installation within a week of being informed that the site is ready.
	c) Complete inventory details along with Serial Numbers linked with Asset Tag of HSM delivered against each PO at ordered delivery locations.	c) Complete inventory details along with Serial Numbers linked with Asset Tag of HSMs delivered against each PO at ordered delivery locations.
	C. For 12% Payment Claim	**C. For 10% Payment Claim**
	a) Satisfactory service report from Bank's project manager. The payment for balance 12% will be divided into four equal installments for year 4 & year 5 and paid half-yearly in advance from the 4th year warranty period. …………………………………………….. ………………………………………………	a) Original invoice for balance 10% claim b) **Bank Guarantee for an equivalent amount valid for a period of 63 months or after completion of 5 years warranty period**. ……………………………………………… ………………………………………………

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Sr. No.	Existing Clause	Modifications / Changes made to Clause
2	………………………………………….. ………………………………………….. **Annexure 12 - Scope of Work with Technical Requirements Details:** **A. Brief Description** ………………………………………. …………………………………………. 5) Implementation of HSM with secure PIN block format with controls to disable outputting PIN block in weaker format ………………………………………. ………………………………………….	………………………………………….. ………………………………………….. **Annexure 12 - Scope of Work with Technical Requirements Details:** **A. Brief Description** ………………………………………. …………………………………………. ~~5) Implementation of HSM with secure PIN block format with controls to disable outputting PIN block in weaker format~~ ………………………………………. ………………………………………….
3	………………………………………….. ………………………………………….. **Annexure 12 - Scope of Work with Technical Requirements Details:** **A. Brief Description** ………………………………………. …………………………………………. 6) The main purpose of HSM will be Aadhaar vault, data encryption/decryption, addition/Modification, Emboss generation, PIN Generation (both of the features requires Encryption & Decryption using HSM) along with Green PIN authorization/authentication functionality (OTP generation and Authentication). If the HSM deployed becomes faulty/ malfunctions, it would be the responsibility of the vendor to get it repaired or replaced at the earliest. ………………………………………. ………………………………………….	…………………………………………….. …………………………………………….. **Annexure 12 - Scope of Work with Technical Requirements Details:** **A. Brief Description** ……………………………………….. ………………………………………….. **6) The main purpose of HSM will be Aadhaar vault, data encryption/decryption. If the HSM deployed becomes faulty/ malfunctions, it would be the responsibility of the vendor to get it repaired or replaced at the earliest.** …………………………………………….. ……………………………………………..

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Annexure 12 - Scope of Work with Technical Requirements Details

B. Technical Specification of HSM

The proposed HSM device should comply with technical specification as mentioned in the table below. If the make and model proposed by the bidder do not comply with this requirement, the bidder would have deemed not to be meeting the requirements hence such bid will be rejected in technical evaluation stage.

Bidder should note that the below Technical specification is based on the minimum requirements of the Bank. Bidders, however, may quote for hardware with higher specifications:

Sr. No.	Existing Specification	Modifications / Changes made
1	**Make:**	
2	**Model:**	
3	**Number of HSM provided: 4 Nos.** (2 no's for each DC & DR sites)	No change
4	Speed: Minimum 500 TPS/CPS (Transactions per second/Commands per second)	No change Published specifications are minimum requirement of the Bank. Bidder may propose device as deemed suitable
General Aspects:		
5	HSM should have dual power source input, dual TCP/IP interface and dual connectivity support.	No change
6	Should support SHA-256 RSA 2048 Format or above. Capable to support 3DES KEY lengths 112bit &168 bit and AES key lengths 128, 192 & 256 bits.	No change
7	Support multi-threading & multi-client so as maximum performance can be achieved.	No change
8	Should support algorithms AES & 3DES	No change
Management facilities:		No change
9	Support SNMP	No change
10	Utilization statistics - Health check	No change

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Sr. No.	Existing Specification	Modifications / Changes made
	diagnostic and error logs	
11	FIPS complaint HSM should have dedicated management Ethernet port with minimum 4X1G network interface.	No change Published specifications are minimum requirement of the Bank. Bidder may propose device as deemed suitable
Security Certification:		
12	Cryptographic module certified to FIPS: 140-2 Level 3	No Change HSM needs to be compliant with FIPS 140-2 level 3.
13	FIPS 140-2 level 3 and CC EAL4+	FIPS 140-2 level 3 ~~and CC EAL4+~~ **(Proposed HSM device should be FIPS certified and proof must be submitted as a part of compliance)**
14	SP800-90B,SP800-90C,BSI DRG.4	No Change
15	FIPS compliant Random number generator	No change
16	FIPS approved algorithms	No change
Security features:		
17	Tamper resistance meeting requirements of CC and FIPS 140-2 Level 3	Tamper resistance meeting requirements of ~~CC and~~ FIPS 140-2 Level 3
18	Detection of cover removal in addition to Alarm triggers for motion, voltage and temperature	No Change
19	Multiple alarm triggers for motion, voltage and temperature	No change
20	Device hardening - ability to disable functions not required by the host application	No change
21	Triple-DES key lengths 112 & 168 bit	No change
22	AES key lengths 128, 192 & 256 bit	No change
23	RSA (up to 4096 bit)	No change Published specifications are minimum

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Sr. No.	Existing Specification	Modifications / Changes made
		requirement of the Bank. Bidder may propose device as deemed suitable
24	HMAC, MD5, SHA-1, SHA-2	No change Published specifications are minimum requirement of the Bank. Bidder may propose device as deemed suitable
Key Features:		
25	Secure Key Storage and Generation for all key types used	No change
26	Secure Host communication using TLS or SSL	No change
27	Remote management and monitoring options.	No change Published specifications are minimum requirement of the Bank. Bidder may propose device as deemed suitable
28	Safety and environmental compliances certifications as per BIS standard	No change
Other Features:		
29	Must support cryptographic offloading and acceleration	No change
30	Should provide authenticated multi-role access control	No change
31	Must have strong separation of administration and operator roles	No change
32	Must have secure key wrapping, backup, replication and recovery.	No change
33	Must support 2048, 4096 and 2048 bit RSA private keys, 256 bit AES keys on FIPS 140-2 Level 3	No change
34	Must support clustering and load balancing	No change Published specifications are minimum requirement of the Bank. Bidder may propose device as deemed suitable

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Sr. No.	Existing Specification	Modifications / Changes made
35	Should support cryptographic separation of application keys using logical partitions	No change
36	Minimum 4 x 1G with Port Bonding	No change Published specifications are minimum requirement of the Bank. Bidder may propose device as deemed suitable
37	Asymmetric public key algorithms: RSA, Diffie Hellman, DSA, ECDSA, ECDH, ECIES.	No change
38	Symmetric algorithms: AES, HMAC, SEED, Triple DES	No change
39	Hash/message digest: SHA-1,SHA-2(224,256,384,512 bit)	No change Published specifications are minimum requirement of the Bank. Bidder may propose device as deemed suitable
40	Support remote administration – including adding applications, updating firmware, and checking status from centralized Location	No change Published specifications are minimum requirement of the Bank. Bidder may propose device as deemed suitable
41	Syslog diagnostics support	No change
42	HSM should have Dual Physical lock	No change
43	Should have ability to regularly expand functionality via firmware or application upgrades.	No change
44	Should have physical and logical security features.	No change
45	Should adhere to all major industry standards, including FIPS-140-2 level 3, PCI-DSS, Common Criteria EAL4+ etc.	Should adhere to all major industry standards, including FIPS-140-2 level 3, PCI-DSS, ~~Common Criteria EAL4+~~ etc.
46	Should have multiple, redundant power supplies and ethernet ports to maintain functionality in the event that one of the either sources should fail.	No change

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47	The solution must have added ability of being spread across multiple locations and managed as a group, synchronizing and load balancing all the units to maintain network functionality even if an entire data center were to lose connectivity	No Change HSM should be capable of maintaining High Availability without use of external load balancer
48	Should support remote access technology with encrypted connection to maintain security in all configuration and remote key loading processes.	No change
49	Must maintain compatibility with wide range of host applications	No change Published specifications are minimum requirement of the Bank. Bidder may propose device as deemed suitable. Device should be supporting wide range of application.

The bidder must enclosed the detailed specifications of proposed HSM together with all related components, licenses etc. in the Technical Bid (Bill of Material), supported by Technical Literature/ Data sheet/ Product Catalogues/Brochures, etc. This is Mandatory for the bidders. Escalation Matrix for the support & services also need to be attached with technical bid.

Format of Bank Guarantee for early release of retention money

To
Chief General Manager (IT)
Bank of Baroda,
Baroda Sun Tower
Bandra Kurla Complex,
Bandra (E), Mumbai 400028

Dear Sir,

1. WHEREAS ……………………………………… (Name of Bidder) a Company registered under the Indian Companies Act, 1956 and having its Registered Office at ………………………………………….., (Please provide complete address) (hereinafter referred to as "Bidder") was awarded a contract by Bank of Baroda (BOB) vide their Purchase Order no. ……………………………… dated …………………………. (Hereinafter referred to as "PO") for …………………………… …………………………………………………………

<Details of equipment that supplied to be filled in table>

and it has been agreed that a payment of Rs. ……………/- (Rupees ………………………………… only) will be made to the Bidder representing balance 10% of the consideration amount against the security of a Bank Guarantee from a Scheduled Commercial Bank in India.

2. Now this deed of guarantee witnessed that in consideration of BOB agreeing to release a sum of Rs. ……………/- (Rupees ………………………………… only)representing balance 10% of the consideration amount payable to the Bidder in terms of, the said agreement, we ………………………………. (Bank) having our head office at ……………………………………………… and amongst other places, a branch at …………………………….. (Hereinafter referred to as the guarantor) do hereby expressly, irrevocably and unreservedly agree and undertake that:

a) In the event of Bidder committing breach of any of the undertakings or committing default in fulfilling any obligation arising out of said agreement, we ……………………….……… (bank) shall on demand, pay BOB without any demur Rs. ……………/- (Rupees ………………………………… only)and notwithstanding any right the Bidder may have against BOB or any disputes raised by the Bidder or any suit or proceedings pending in any competent Court of Law in India or otherwise or before any arbitrator, and BOB's written demand shall be conclusive evidence to us that such amount is payable by us under the said contract and shall be binding in all respects on the Guarantor.

3. The Guarantor shall not be discharged or released from the aforesaid undertaking and guarantee by any agreement, variations made between BOB and the Bidder, indulgence shown to the Bidder by BOB, with or without the consent and knowledge of the Guarantor or by any alterations in the obligations of the Bidder by any forbearance whether as to payment, time performance or otherwise.

4. (a) This guarantee shall remain valid until (date which is 3 months after expiry of warranty period), or until discharged by BOB in writing.

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(b) This guarantee shall be a continuing guarantee and shall not be revocable except with the previous written consent of BOB and save as aforesaid it will be in force until the Bidder complies with its obligations hereunder.

(c) This Guarantee shall not be affected by any change in the constitution of the Bidder by absorption with any other body or corporation or dissolution or otherwise and this guarantee will be available to or enforceable against such body or corporation.

5. In order to give effect to this guarantee, BOB will be entitled to act as if the guarantor were the principal debtor and the guarantor hereby waives all and any of its rights of surety ship.

6. This guarantee shall continue to be in force notwithstanding the discharge of the Bidder by operation of law and shall cease only on payment of the full amount by the guarantor to BOB of the amount hereby secured.

7. This Guarantee shall be in addition to and not in substitution for any other guarantee or security for the Bidder given or to be given to BOB in respect of the said contract.

8. Any notice by way of request and demand or otherwise hereunder may be sent by post or any other mode of communication to the guarantor's address as aforesaid, and if sent by post, it shall be deemed to have been given at the time when it would be delivered in due course by post and in proving such notice when given by post it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of BOB that the envelope was so posted shall be conclusive.

9. These presents shall be governed by and construed in accordance with Indian Law. Notwithstanding anything contained herein:

a) Our liability under this Bank Guarantee shall not exceed Rs. ……………/- (Rupees …………………………………… only)

b) This Bank Guarantee shall be valid up to (date which is 3 months after expiry of warranty period) and

c) We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written claim or demand on or before _____ (three months after the date of expiry of the warranty).

d) The guarantor has under its constitution powers to give this guarantee and Shri. ………………… (Signatories) Officials / Managers of the Bank who has/have signed this guarantee has/have powers to do so.

Dated this .... day of................ 201 at ....

For and on behalf of........................... (Bank).

Authorized Signatory .... in favor of the Bank

Designation ....

Annexure A

Pre-bid queries response as part of Addendum

Bank's clarification on Pre-bid Queries from Prospective Bidders for RFP of RRB's HSM (Bid no. GEM/2023/B/3428826 dated 09th May 2023)

S No	Point / Section #	Clauses mentioned in RFP Document	Comment/Suggestions (From Vendors)	Bank's Clarifications to the bidder query
1	Annexure 02 - Eligibility Criteria : D-1: Experience & Support Infrastructure (Page 51)	Bidder should have Supplied, Installed, Supported & successfully completed the implementation for at least -2- no's of proposed / similar HSMs in past 3 Years to Commercial Banks / Financial Institutions / Government / PSU Organizations in India	We are request to you kindly change the clause as " Bidder / OEM should have Supplied, Installed, Supported & successfully completed the implementation for at least -2- no's of proposed / similar HSMs in past 3 Years to Commercial Banks / Financial Institutions / Government / PSU Organizations in India"	No change.
2	3.5 Bid Security / EMD (Page 27)		We registered under MSME Medium UDYAM REGISTARION So request to you kindly allow for exemption from EMD and tender fee	Micro and Small Enterprises / Startups are exempted from EMD subject to having a valid registration certificate. Bid Security related exemptions as specified in clause 4, Section xiii, Sub-section 'm' of GeM GTC are applicable as the case may be.
3	Scope	Additional clarification	Does the bidder HSM solution need to provide seamless migration of existing keys from current HSM without exporting or taking the keys out from hsm in plaintext?	Migration of keys is not required
4	Scope	Additional clarification	Does the bidder need to migrate the existing Encryption keys from current HSM to the new hsm without any downtime & no changes in the application?	Migration of keys is not required