



Request for Proposal (RFP)

For

Selection of System Integrator (SI) for Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software, Facility Management Services for Finacle Core Banking (Version 10.x) & E-Banking (FEBA) at DC, DR and Near DR Site (Re-tendering)

Head Office-2
Department of Information Technology
5th Floor, 3 & 4 DD Block, Sector -1
Salt Lake, Kolkata-700 064

RFP REF NO: DIT/BPR&BTD/OA/246/2020-21

Date: 18/05/2020

The information provided by the bidders in response to this RFP Document will become the property of the Bank and will not be returned. The Bank reserves the right to amend, rescind, reissue this RFP Document and all amendments will be advised to the bidders and such amendments will be binding on them. The Bank also reserves its right to accept or reject any or all the responses to this RFP Document without assigning any reason whatsoever.

This document is prepared by UCO Bank for Selection of System Integrator (SI) for Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software, Facility Management Services for Finacle Core Banking (Version 10.x) and E-Banking (FEBA) at DC, DR and Near DR Site (Re-tendering). It should not be reused or copied or used either partially or fully in any form.

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While the document has been prepared in good faith, no representation or warranty, express or implied, is or will be made, and no responsibility or liability will be accepted by UCO Bank or any of its employees, in relation to the accuracy or completeness of this document and any liability thereof expressly disclaimed. The RFP is not an offer by UCO Bank, but an invitation for bidders' responses. No contractual obligation on behalf of UCO Bank, whatsoever, shall arise from the offer process unless and until a formal contract is signed and executed by duly authorized officials of UCO Bank and the Bidder.

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Bid Control Sheet

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| Tender Reference | DIT/BPR&BTD/OA/246/2020-21 dated 18.05.2020 |
| Cost of Tender documents | Rs.20,000/- (Rupees Twenty Thousand only) |
| Date of issue of RFP | 18.05.2020 |
| Earnest Money Deposit (EMD) | Rs.1,00,00,000/- (Rupees One Cores only) (in the form of Bank Guarantee) |
| Date of commencement of sale of tender document | 18.05.2020 |
| Last date for submitting queries for the Pre-bid Meeting | 25.05.2020 |
| Pre-Bid meeting /Venue | 27.05.2020 at 11:00 AM, UCO Bank, Head Office-2 Department of Information Technology (DIT) 3 & 4 DD Block (5th Floor), Sector -1, Salt Lake, Kolkata-700 064 |
| Last Date and Time for receipts of tender bids | 09.06.2020 at 4:00 PM |
| Opening of technical bids | 09.06.2020 at 4:30 PM |
| Opening of Commercial/Price Bid | Will be advised subsequently to technically qualified bidders. |
| Address of Communication | UCO Bank, Head Office-2 Department of Information Technology (DIT) 7th Floor, 3 & 4 DD Block, Sector -1, Salt Lake, Kolkata-700 064 |
| Email address | hodit.proc@ucobank.co.in |
| Contact Telephone/Fax Numbers | Tel : 033-4455 9630/9020 |
| Bids to be submitted | Tender box placed at: UCO BANK, Head Office-2, Department of Information Technology, 5th Floor, 3 & 4, DD Block, Sector -1, Salt Lake, Kolkata-700 064. |

Note: Bids will be opened in presence of the bidders' representatives (maximum two representatives per bidder) who choose to attend. In case the specified date of submission & opening of Bids is declared a holiday in West Bengal under the NI act, the bids will be received till the specified time on next working day and will be opened at 4:30 p.m. UCO Bank is not responsible for non-receipt of responses to RFP within the specified date and time due to any reason including postal holidays or delays. Any bid received after specified date and time of the receipt of bids prescribed as mentioned above, will not be accepted by the Bank. Bids once submitted will be treated as final and no further correspondence will be entertained on this. No bid will be modified after the specified date & time for submission of bids. No bidder shall be allowed to withdraw the bid. The bidder appointed under the RFP document shall own the single point responsibility for fulfilling all obligations and providing all deliverables and services required for successful implementation of the project. Unless agreed to specifically by the Bank in writing for any changes in the document issued, the bidder responses should comply with the scope of work. Unless expressly overridden by the specific agreement to be entered into between the Bank and the bidder, the RFP document shall be the governing document for arrangement between the Bank and the selected bidder in terms of this RFP document.

Part – I

1. Introduction

UCO Bank, a body corporate, established under the Banking Companies (Acquisition and Transfer of Undertakings) Act 1970, having its Head Office at 10, B.T.M. Sarani, Kolkata-700001, India, and its Department of Information Technology at 3 & 4, DD Block, Sector-1, Salt Lake, Kolkata - 700064, hereinafter called "the Bank", is one of the leading public sector Banks in India having more than 3100 branches, two overseas Branches one each at Singapore & Hong Kong Centres and more than 2000 ATMs (including Biometric enabled ATMs), spread all over the country. All the branches of the Bank are CBS enabled through Finacle as a Core Banking Solution. Bank is having tie up with Visa & NPCI and distributes VISA and RuPay enabled debit cards to the customers. Bank has also installed some machines for cash deposit, cheque deposit and passbook printing. The existing Cash Deposit kiosks, Cheque Deposit Machines and Self-Service Passbook Printing Kiosks are directly integrated with Bank's Core Banking System.

2. Objectives

UCO Bank is in the process of upgradation of Core banking system from Finacle 7 to Finacle 10.X and Internet Banking Solution to FEBA.

For the aforesaid purpose, UCO Bank intends to procure hardware (servers, storage, tape library, SAN switch, ADC & Load balancer etc.), software (Backup, tools, middleware etc.), its installation, integration, implementation and maintenance and FM services in Bank's Core Banking (Finacle Core Banking version 10.x and FEBA with DEH & FAS) environment as per the specifications as indicated in this RFP.

Bidders are expected to examine all instructions, forms, terms, specifications, and other information including terms and conditions in the RFP document. Failure to furnish any information required in response of the RFP or to submit a bid not substantially responsive to the RFP document in every respect will be at the bidder's risk and may result in the rejection of its bid.

The bidder should provide the required hardware, software, licenses etc. for successful implementation of Finacle 10.x & FEBA. **The location address will be shared to the successful bidder.**

3. Eligibility Criteria

The eligibility criteria to participate in bidding process are mentioned below. Only those bidders, who satisfy all the eligibility criteria as mentioned herein below, may respond. Document in support of all eligibility criteria are required to be submitted in Eligibility Bid. Offers received from the bidders who do not fulfil any of the following eligibility criteria are liable to be rejected.

| Sl. No. | Eligibility Criteria | (Proof of documents required / must be submitted) |
|---------|--|--|
| 1 | The Bidder should be a registered company in India as per Companies Act 1956 / 2013 and must be in existence for the last 5 years as on the date of RFP. | The Certificate of Incorporation & commencement of Business (whichever is applicable) issued by Registrar of Companies along with the copies of Memorandum and Articles of Association are required to be submitted along with the eligibility bid. |
| 2 | The bidder must have minimum annual turnover of Rs. 500 crore each in last three financial years i.e. 2016-17, 2017-18 & 2018-19. This must be the individual company turnover and not that of any group of companies. | Copy of Audited Balance sheet for the financial years i.e. 2016-17, 2017-18 & 2018-19 should be submitted. Also a Certificate signed by the Chartered Accountants regarding company's financial capability to be submitted. |
| 3 | The Bidder should have operating Profit in the last three financial years (2016-17, 2017-18 & 2018-19). | Copy of Audited balance sheet of the financial years i.e. 2016-17, 2017-18 & 2018-19 should be submitted. |
| 4 | The bidder should be Original Equipment Manufacturer (OEM) of Hardware or their authorized representative / System Integrator (SI) in India. | The bidder needs to submit Manufacturer Authorization Form (MAF), having reference of this RFP, from respective OEMs as per Annexure-C stating that bidder is authorized partner/ System Integrator of OEM and is authorized to participate in this RFP. In case of OEM, self-declaration on Company Letter Head as per Annexure-C format duly signed & stamped to be submitted. |

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| 5. | Proposed OEMs product on (RISC/EPIC) based Enterprise Class server, Enterprise Class Storage, Tape Library, backup solution and Unix Operating System (AIX/Solaris/HP Unix) should have been supplied, integrated and running as on date in at least one Public/Private Sector Banks in Core Banking environment with Finacle in India. | Copy of purchase order and reference letters/ completion certificates to be enclosed containing contact details of the signing authority of the masked purchase order / authorization letter. |
| 6. | Proposed x86 Enterprise Class Server OEM should have installation base in at least one Govt organization/PSU in India having minimum 40 nos. of x86 Enterprise Class Servers with minimum 400 cores with Red hat Linux Operating System and running successfully on Critical OLTP application last 3 years as on date submission of RFP. | Copy of purchase order and reference letters/ completion certificates mentioning details of hardware used along with details of Critical OLTP system running to be enclosed containing contact details of the signing authority of the masked purchase order / authorization letter. |
| 7 | Proposed OEMs for disk-based backup solution, load balancer, SAN switch, NAS and Enterprise Management System (EMS) Tool should have been supplied, integrated and running successfully as on date in at least one BFSI in India. | Copy of purchase order and reference letters/ completion certificates to be enclosed containing contact details of the signing authority of the masked purchase order / authorization letter. |
| 8. | The proposed OEMs hardware/software like servers, storage, load balancer, SAN switch/director, and backup solution, NAS, operating system, EMS Tool, operating system and any other license software required for implementation of Finacle 10.x & FEBA should have a clear support roadmap for minimum Seven (7) years from date of submission of RFP and upgrades (if required) must be made available during the contract period. | A written confirmation to be provided from the OEM on OEM's letterhead (signed & stamped by OEM) as per Annexure-C |
| 9. | The bidder should have experience in delivery, integration, installation, management and maintenance of Core Banking Solution & Infrastructure in at least one in Public / Private Sector Bank(s) in India having more than 1000 branches operation in the last 10 years along with | A copy of Purchase Order and the necessary experience certificate along with reference letter having delivery, integration, installation, management and maintenance of Server Infrastructure experience in Public / |

| | | |
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| | the following areas of Banking setup: a) IT Infrastructure like Management of Servers, Storage, SAN Switch, Backup solution. b) Database & Operating System administration & management | Private Sector Bank to be enclosed with the bid documents. |
| 10. | Bidder should have a tie-up arrangement with external agencies (Maximum two agencies) having experience in below mentioned area for Finacle 10.x migration in Public / Private Sector Bank(s) in India having more than 1000 branches a. Functional Testing & UAT of all modules, Interface & automation experience b. Security testing c. Performance Testing d. Pre and post Data Migration checking & testing | Relevant Credential letters having name of proposed testing agency along with Purchase Order, Contract Copy with the Bank's confirmation on having executed the PO/Contract having name of proposed testing agency. |
| 11. | The Bidder/OEM should have offices in Kolkata and Bengaluru for after sale support and maintenance of offered hardware and software. | List of branch / support offices full details of Name, Address / Telephone Numbers on the company's letter head should be submitted. |
| 12. | Bidder and OEM should not have been black-listed by any Public sector bank / government institution in India as on RFP date. | An undertaking to this effect must be submitted in their respective letter head. |

Note: - In this tender process, either authorized representative / distributor in India on behalf of Principal OEM (Original Equipment Manufacturer) or Principal OEM itself can bid but both cannot bid simultaneously. In such case OEM bid will only be accepted. If an agent / distributor submits bid on behalf of the Principal OEM, the same agent / distributor shall not submit a bid on behalf of another Principal OEM in the same tender for the same item or product. Bank right to verify the credential latter submitted by bidder directly from respective client. Credential letter should be undersigned with the rank of DGM/VP or above.

Bidder must comply with all above-mentioned criteria. Non-compliance of any of the criteria will entail rejection of the offer summarily. **Photocopies of relevant documents / certificates should be submitted as proof in support of the claims made.** UCO BANK reserves the right to verify /evaluate the claims made by the bidder independently. Any decision of UCO BANK in this regard shall be final, conclusive and binding upon the bidder. The Bank may accept or reject an offer without assigning any reason whatsoever.

Part –II: INVITATION FOR BIDS AND INSTRUCTIONS TO BIDDERS

1. Invitation for Bids

UCO Bank invites sealed tenders comprising of Eligibility Bid, Technical bid and Commercial bid from experienced prospective bidders having proven capabilities for Selection of System Integrator (SI) for Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software Facility Management Services for Finacle Core Banking (Version 10.x) and E-Banking (FEBA) at DC, DR and Near DR Site. The prospective bidder is required to adhere to the terms of this RFP document and any deviations to the same shall not be acceptable to UCO Bank. Sealed offers / Bids (Bid) prepared in accordance with this RFP should be submitted as per details given in the Bid Control sheet. The criteria and the actual process of evaluation of the responses to this RFP and subsequent selection of the successful bidder will be entirely at Bank's discretion.

2. Due Diligence

The Bidder is expected to examine all instructions, forms, terms and specifications in this RFP and study the RFP document carefully. Bid shall be deemed to have been submitted after careful study and examination of this RFP with full understanding of its implications. The Bid should be precise, complete and in the prescribed format as per the requirement of this RFP. Failure to furnish all information required by this RFP or submission of a Bid not responsive to this RFP in each and every respect will be at the Bidder's own risk and may result in rejection of the Bid and for which UCO Bank shall not be held responsible.

3. Tender Document and & Fee

A complete set of tender document can be obtained from the following address during office hours on all working days on submission of a written application along with a non-refundable fee of **Rs.20, 000/- (Rupees Twenty Thousand Only)**.

A complete set of tender documents can also be downloaded from Bank's website www.ucobank.com. The Cost of tender documents shall be paid through NEFT mode or by Demand Draft / Banker's Cheque / Pay Order drawn in favour of UCO Bank payable at Kolkata. The bidder has to provide the Bank the UTR no. generated after the NEFT (hard copy of the receipt generated should be submitted along with the bid documents), failing which the bid of the concerned bidder will be rejected. The Cost of tender document is non-refundable.

In case of bidders being an MSME under registration of any scheme of Ministry of MSME, they are exempted from the submission of EMD and the Tender Cost / Fee. A valid certificate in this regard issued by the Ministry of MSME has to be submitted along with the bid.

The Bank details are as below:

| Bank details for Tender Fee | Address for Obtaining printed copy of RFP |
|--|--|
| Account Number-18700210000755 Account Name- M/s H O DIT Branch- DD Block, Salt Lake branch IFSC- UCBA0001870 MICR-700028138 | UCO Bank Head office, Department of Information Technology 3&4 DD Block, 7th floor, Salt lake City, Sector-1, Kolkata – 700064 Ph- 033- 4455 9775/9770 |

4. Earnest Money Deposit

The Bidder(s) must submit Earnest Money Deposit along with Eligibility Bid in the form of Bank Guarantee valid for a period of 180 days, with a further claim period of 30 days from the date of opening of Eligibility/Technical Bid in the format given in **Annexure J**, in favour of UCO Bank payable at Kolkata for an amount mentioned hereunder:

| Particulars of Job to be undertaken | EMD |
|--|---|
| Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software, Facility Management Services for Finacle Core Banking (Version 10.x) and E-Banking (Version 11.x) at DC, DR and Near DR Site | Rs.1,00,00,000/- (Rupees One Cores Only) |

Non-submission of Earnest Money Deposit will lead to outright rejection of the Offer. The EMD of unsuccessful bidders will be returned to them on completion of the procurement process. The EMD (Earnest Money Deposit) of successful bidder(s) will be returned on submission of Performance Bank Guarantee.

The EMD will not bear any interest and it may be forfeited under the following circumstances:

- If the bidder withdraws its bid during the period of bid validity (180 days from the date of opening of bid).
- If the bidder makes any statement or encloses any form which turns out to be false, incorrect and / or misleading at any time prior to signing of contract and/or conceals or suppresses material information; and / or

- c. The selected bidder withdraws his tender before furnishing an unconditional and irrevocable Performance Bank Guarantee.
- d. The bidder violates any of the provisions of the terms and conditions of this tender specification.
- e. In case of the successful bidder, if the bidder fails:
 - To sign the contract in the form and manner to the satisfaction of UCO BANK.
 - To furnish Performance Bank Guarantee in the form and manner to the satisfaction of UCO BANK within the stipulated time period or before the execution of Service Level Agreement (SLA).

5. Rejection of the Bid

The Bid is liable to be rejected if:

- a. The document does not bear signature of authorized person on each page signed and duly stamp.
- b. It is received through Fax/E-mail.
- c. It is received after expiry of the due date and time stipulated for Bid submission.
- d. Incomplete Bids /Conditional Bids/ incorrect information in bid / Bids not conforming to the terms and conditions stipulated in this Request for proposal (RFP) are liable for rejection by the Bank.
- e. Non-submission of Integrity pact or any other documents mentioned in the RFP shall be liable for rejection
- f. Bidder should comply with all the points mentioned in the RFP. Noncompliance of any point will lead to rejection of the bid.
- g. Any form of canvassing/lobbying/influence/query regarding short listing, status etc. will be a disqualification.
- h. Non-submission of Pre Contract Integrity Pact as per format given in **Annexure – H**.

6. Pre Bid Meeting

The queries for the Pre-bid Meeting should be reached by email on or before the date mentioned in the Bid Control Sheet by e-mail to hodit.proc@ucobank.co.in. It may be noted that no query from any bidder shall be entertained or received after the above mentioned date. Queries raised by the prospective bidder and the Bank's response will be sent to each individual bidder. The Pre-Bid Meeting date is mentioned in bid control sheet.

Only authorized representatives of bidder will be allowed to attend the Pre-bid meeting.

Pre-bid queries raised by the bidder(s) are to be submitted in the format given in **Annexure – I.**

7. Modification and Withdrawal of Bids

No bid can be modified by the bidder subsequent to the closing date and time for submission of bids. In the event of withdrawal of the bid by successful bidders, the EMD will be forfeited by the Bank.

8. Information Provided

The RFP document contains statements derived from information that is believed to be reliable at the date obtained but does not purport to provide all of the information that may be necessary or desirable to enable an intending contracting party to determine whether or not to enter into a contract or arrangement with Bank in relation to the provision of services. Neither Bank nor any of its employees, agents, contractors, or advisers gives any representation or warranty, express or implied as to the accuracy or completeness of any information or statement given or made in this RFP document.

9. Clarification Of Offer

To assist in the scrutiny, evaluation and comparison of offers/bids, UCO Bank may, at its sole discretion, ask some or all bidders for clarification of their offer/bid. The request for such clarifications and the response will necessarily be in writing and no change in the price or substance of the bid shall be sought, offered or permitted. Any decision of UCO Bank in this regard shall be final, conclusive and binding on the bidder.

10. Late Bids

Any bid received by the Bank after the deadline (Date and Time mentioned in Bid Details table / Pre Bid / subsequent addenda / corrigenda) for submission of bids will be rejected and / or returned unopened to the bidder.

11. Issue Of Corrigendum

At any time prior to the last date of receipt of bids, Bank may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the RFP document by a Corrigendum. Any such corrigendum shall be deemed to be incorporated into this RFP.

12. For Respondent Only

The RFP document is intended solely for the information to the party to whom it is issued ("the Recipient" or "the Respondent") and no other person or organization.

13. Disclaimer

Subject to any law to the contrary, and to the maximum extent permitted by law, Bank and its officers, employees, contractors, agents, and advisers disclaim all liability from any loss or damage (whether foreseeable or not) suffered by any person acting on or refraining from acting because of any information, including forecasts, statements, estimates, or projections contained in this RFP document or conduct ancillary to it whether or not the loss or damage arises in connection with any negligence, omission, default, lack of care or misrepresentation on the part of Bank or any of its officers, employees, contractors, agents, or advisers.

14. Selection Process

Technically qualified bidder with the lowest quote based on TCO as quoted in Annexure – E, will be considered as the L1 bidder.

15. MSME

As per recommendations of GOI, Bank has decided to waive off EMD and tender cost for MSME entrepreneurs.

- i. Exemption from submission of EMD and Tender Fee / Cost shall be given to bidders who are Micro, Small & Medium Enterprises (MSME) and registered under provisions of the Policy i.e. registration with District Industries Centre (DIC) or Khadi and Village Industries Commission (KVIC) or Khadi and Industries Board (KVIB) or Coir Board or National Small Industries Commission (NSIC) or directorate of Handicrafts and Handlooms or Udyog Aadhaar Memorandum or any other body specified by Ministry of MSME. Bids received without EMD and tender cost from bidders not having valid NSIC registered documents for exemption will not be considered.
- ii. To qualify for EMD & Tender Fee / Cost exemption, firms should necessarily enclose a valid copy of registration certificate which is valid on last date of submission of the tender documents. MSME firms who are in the process of obtaining registration will not be considered for EMD & Tender Fee / Cost exemption. (Traders are excluded who are engaged in trading activity without value addition / branding / packing. In such a case they will have to submit EMD and Tender Cost).

- iii. MSME bidder has to submit a self-declaration accepting that if they are awarded the contract and they fail to sign the contract or to submit a Performance Bank Guarantee before the deadline defined by the Bank, they will be suspended for a period of three years from being eligible to submit bids for contracts with the Bank.
- iv. Bids received without EMD for bidders not having valid registration documents for exemption will not be considered. However, Performance Bank Guarantee has to be submitted by the bidder under any circumstance.

16. Costs Borne by Respondents

All costs and expenses incurred by Recipients / Respondents in any way associated with the development, preparation, and submission of responses, including but not limited to attendance at meetings, discussions, demonstrations, etc. and providing any additional information required by Bank, will be borne entirely and exclusively by the Recipient / Respondent.

17. No Legal Relationship

No binding legal relationship will exist between any of the Recipients / Respondents and Bank until execution of a contractual agreement.

18. Cancellation of Tender Process

UCO Bank reserves the right to cancel the tender process partly or fully at its sole discretion at any stage without assigning any reason to any of the participating bidder.

19. Corrupt And Fraudulent Practices

As per Central Vigilance Commission (CVC) directives, it is required that Bidders / Suppliers / Contractors observe the highest standard of ethics during the procurement and execution of such contracts in pursuance of this policy:

“Corrupt Practice” means the offering, giving, receiving or soliciting of anything of values to influence the action of an official in the procurement process or in contract execution

and

“Fraudulent Practice” means a misrepresentation of facts in order to influence a procurement process or the execution of contract to the detriment of the Bank and includes collusive practice among bidders (prior to or after bid submission) designed to

establish bid prices at artificial non-competitive levels and to deprive the Bank of the benefits of free and open competition.

The Bank reserves the right to reject a proposal for award if it determines that the bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question.

The Bank reserves the right to declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract if at any time it determines that the firm has engaged in corrupt or fraudulent practices in competing for or in executing the contract.

20. Non-Transferrable Offer

This Request for Proposal (RFP) is not transferable. Only the bidder who has purchased this document in its name or submitted the necessary RFP price (for downloaded RFP) will be eligible for participation in the evaluation process.

21. Period of Bid Validity

Bids shall remain valid for one year after the date of bid opening prescribed by UCO BANK. UCO BANK holds the rights to reject a bid valid for a period shorter than 1 year as non-responsive, without any correspondence. In exceptional circumstances, UCO BANK may solicit the Bidder's consent to an extension of the validity period. The request and the response thereto shall be made in writing. Extension of validity period by the Bidder should be unconditional and irrevocable. The Bid Security provided shall also be suitably extended. A bidder acceding to the request will neither be required nor be permitted to modify its bid. A bidder may refuse the request without forfeiting its bid security. In any case the bid security of the bidders will be returned after completion of the process.

22. No Commitment To Accept Lowest Or Any Bid

UCO Bank shall be under no obligation to accept the lowest or any other offer received in response to this RFP and shall be entitled to reject any or all offers including those received late or incomplete offers without assigning any reason whatsoever. UCO Bank reserves the right to make any changes in the terms and conditions of purchase. UCO Bank will not be obliged to meet and have discussions with any vendor, and or to listen to any representations.

23. Errors and Omissions

Each Recipient should notify Bank of any error, omission, or discrepancy found in this RFP document in the form of pre-bid queries within time as given in control sheet.

24. Acceptance of Terms

A Recipient will, by responding to Bank RFP, be deemed to have accepted the terms as stated in the RFP.

Failure of the successful bidder to agree with the Draft Legal Agreement and Terms & Conditions of the RFP shall constitute sufficient ground for annulment of the award, in which event, bank may award the contract to the next best value bidder or call for new proposals from the interested bidders.

In such a case, bank shall appropriate the EMD/invoke the PBG of the successful bidder.

25. RFP Response

If the response to this RFP does not include the information required or is incomplete or submission is through Fax or through e-mail, the response to the RFP is liable to be rejected.

All submissions will become the property of Bank. Recipients shall be deemed to license, and grant all rights to, Bank to reproduce the whole or any portion of their submission for the purpose of evaluation, to disclose the contents of the submission to other Recipients who have registered a submission and to disclose and/or use the contents of the submission as the basis for any resulting RFP process, notwithstanding any copyright or other intellectual property right that may subsist in the submission or Banking documents.

26. RFP Response Validity Period

RFP response will remain valid and open for evaluation according to their terms for a period of at least **one year** from the time the RFP response submission process closes. However Bank may extend this period under special Circumstances for a further period of six month with an intimation to bidder.

27. Notification

Bank will notify the Respondents in writing as soon as possible about the outcome of the RFP evaluation process, including whether the Respondent's RFP response has been accepted or rejected. Bank is not obliged to provide any reasons for any such acceptance or rejection.

28. Erasures or Alterations

The Bid should contain no alterations, erasures or overwriting except as necessary to correct errors made by the Bidder, in which case corrections should be duly stamped and initialed / authenticated by the person/(s) signing the Bid.

29. Clarifications on and Amendments to RFP Document

Prospective bidders may seek clarification on the RFP document by letter/fax/e-mail till the date mentioned in the bid control sheet. Further, at least 7 days' time prior to the last date for bid-submission, the Bank may, for any reason, whether at its own initiative or in response to clarification(s) sought from prospective bidders, modify the RFP contents by amendment. Clarification /Amendment, if any, will be notified on Bank's website.

30. Language of Bids

The bid as well as all correspondence and documents relating to the bid exchanged by the bidder and the Bank shall be in English language only.

31. Authorized Signatory

The bid shall be signed by a person or persons duly authorized by the Bidder with signature duly attested. In the case of a body corporate, the bid shall be signed by person who is duly authorized by the Board of Directors / Competent Authority of the bidder or having Power of Attorney.

The bidder shall indicate the authorized signatories who can discuss, sign negotiate, correspond and any other required formalities with the bank, with regard to the obligations. The selected bidder shall submit, a certified copy of the resolution of their Board, authenticated by Company Secretary along with Power of Attorney duly stamped, authorizing an official or officials of the company to discuss, sign with the Bank, raise invoice and accept payments and also to correspond. **The bidder shall furnish proof of signature identification for above purposes as required by the Bank.**

32. Submission of Offer – Three Bid System

Separate Eligibility, Technical and Commercial Bids along with the soft copies duly sealed and super-scribed as "Selection of System Integrator (SI) for Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software (Application Server and Backup), Facility Management Services for Finacle Core Banking (Version 10.x) and E-Banking (FEBA) at DC, DR and Near DR Site (Re-tendering)(Eligibility Bid)", "Selection of System Integrator (SI) for Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software (Application Server and Backup), Facility Management Services for Finacle Core Banking (Version 10.x) and Finacle E-Banking (FEBA) at DC, DR and Near DR Site (Re-tendering) (Technical Bid)" and "Selection of System Integrator (SI) for Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software (Application Server and Backup), Facility Management Services for Finacle Core Banking (Version 10.x) and E-Banking (FEBA) at DC, DR and Near DR Site (Re-tendering) (Commercial Bid)" respectively should be put in a single sealed outer cover duly sealed and super-scribed as - "Selection of System Integrator (SI) for Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software (Application Server and Backup), Facility Management Services for Finacle Core Banking (Version 10.x) and E-Banking (FEBA) at DC, DR and Near DR Site (Re-tendering)" with RFP Ref No. and date as per the below mentioned diagram and as per bid details given in the RFP.

Sealed separate envelopes carrying, Eligibility Bid, Technical Bid and Commercial Bid along with the soft copies should be kept in a single sealed outer cover duly sealed and super-scribed "Selection of System Integrator (SI) for Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software (Application Server and Backup), Facility Management Services for Finacle Core Banking (Version 10.x) and E-Banking (FEBA) at DC, DR and Near DR Site (Re-tendering)" as per the below mentioned diagram and as per bid details given in the RFP.

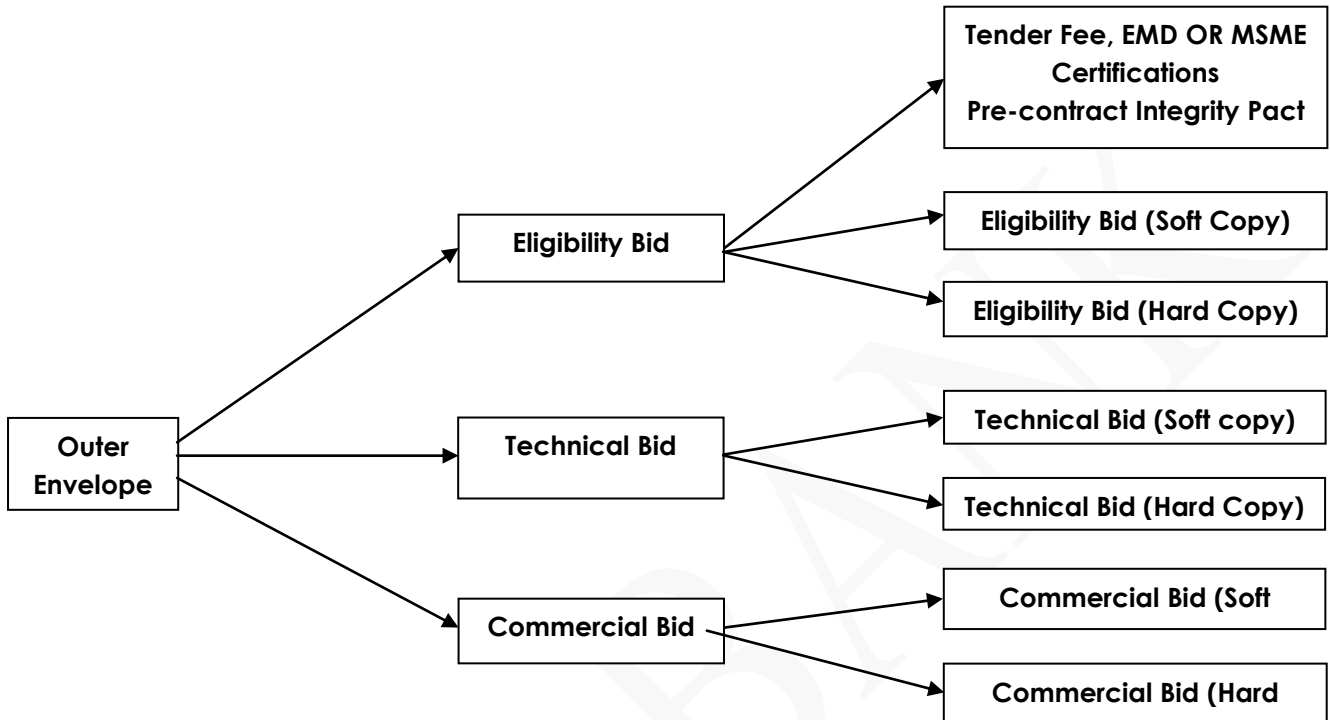
The bids (along with soft copy) shall be dropped/submitted at UCO Bank's address given in Bid Control Sheet Table, on or before the date specified therein.

All envelopes must be super-scribed with the following information:

- Name of the Bidder
- Bid Reference No.
- Type of Bid (Eligibility or Technical or Commercial)

The Eligibility and Technical Bid should be complete in all respects and contain all information asked for, in the exact format of eligibility and technical specifications given in the RFP, except prices. The Eligibility and Technical Bids must not contain any price information otherwise BANK, at its sole discretion, may not evaluate the same. Any

decision of UCO BANK in this regard shall be final, conclusive and binding upon the bidders. The Eligibility bid should have documentary proof in support of Eligibility Criteria and all the Annexures as per RFP document.



The Commercial Bid (Hard Copy) should contain all relevant price information and should not contradict the Technical Bid in any manner.

All pages and documents in individual bids should be numbered as page no.-(Current Page No.) of page no- (Total Page No.) and should contain tender reference no. and Bank's Name.

32.1 The Technical bid should be complete in all respects and contain all information asked for, except prices. The documentary proof in support of all Eligibility Criteria should be submitted along with Eligibility Bid. Bidder needs to submit technical bill of materials properly mentioning Make/model, part no, version and quantity along with Technical bid.

32.2 One Separate envelope containing Tender Fee, EMD and Pre-Contract Integrity Pact should invariably be placed in Eligibility Bid envelope.

- 32.3 If commercial bid is not submitted in a separate sealed envelope duly marked as mentioned above, this will constitute grounds for declaring the bid non-responsive.
- 32.4 Bidders to submit a **masked commercial Bid** i.e. by hiding price commercial bid as per **Annexure - E** with technical bid envelope to be submitted.
- 32.5 If any inner cover / envelop of a bid is found to contain Eligibility/ Technical & Commercial Bids together then that bid will be rejected summarily.
- 32.6 The Bank reserves the right to resort to re-tendering without providing any reason whatsoever. The Bank shall not incur any liability on account of such rejection.
- 32.7 Canvassing of any kind or Bid submitted with false information will be a disqualification.
- 32.8 The bidder is required to guarantee that exchange rate fluctuations, changes in import duty and other taxes will not affect the Rupee value of the commercial bid over the price validity period.
- 32.9 Prices quoted by the Bidder shall be in Indian Rupees, firm and not subject to any price escalation, if the order is placed within the price validity period.
- 32.10 Further, subsequent to the orders being placed, the Bidder shall pass on to the Bank all fiscal benefits arising out of reductions in Government levies /taxes.
- 32.11 The Bank reserves the right to modify any terms, conditions and specifications of this request for submission of offer and to obtain revised bids from the bidders with regard to such changes. The Bank reserves the right to accept or reject any bid.
- 32.12 Printed literature (for specific product and version numbers) describing configuration and functionality should be provided to the Bank for the products proposed to be supplied for the project. It should be noted that the product proposed will have to be supplied with all the software updates/fixes, if any, and associated documents. The bidder shall not quote for the products, whose End of sale/ End of Support/End of License has been declared by the OEM.
- 32.13 The Bank reserves the right to resort to re-tendering without providing any reason whatsoever. The Bank shall not incur any liability on account of such rejection
- 32.14 Bids once submitted shall not be returned to the Bidder in future.

The selected bidder must adhere to the terms of this RFP document.

33. Other Terms and Conditions

- a. **Cost of preparation and submission of bid document:** The bidder shall bear all costs for the preparation and submission of the bid. UCO Bank shall not be responsible or liable for reimbursing/compensating these costs, regardless of the conduct or outcome of the bidding process.
- b. The Bank reserves the right to modify any terms, conditions and specifications of this request for submission of offer and to obtain revised bids from the bidders with regard to such changes. The Bank reserves its right to negotiate with any or all bidders. The Bank reserves the right to accept any bid in whole or in part.
- c. The Bank reserves the right to reject any or all offers based on its own evaluation of the offers received, or on the basis of stability, capabilities, track records, reputation among users and other similar features of a bidder. When the Bank makes any such rejection, the Bank will not be bound to give any reason and/or justification in this regard to the bidder. The Bank further reserves the right to reject any or all offers or cancel the whole tendering process due to change in its business requirement.
- d. **Response of the Bid:** The Bidder should comply all the terms and conditions of RFP.
- e. The bidder is solely responsible for any legal obligation related to licenses during contract period for the solution proposed and Bidder shall give indemnity to that effect.
- f. UCO Bank shall be under no obligation to accept the lowest or any other offer received in response to this offer notice and shall be entitled to reject any or all offers without assigning any reason whatsoever. UCO Bank has the right to re-issue tender/bid. UCO Bank reserves the right to make any changes in the terms and conditions of purchase that will be informed to all bidders. UCO Bank will not be obliged to meet and have discussions with any bidder, and / or to listen to any representations once their offer/bid is rejected. Any decision of UCO Bank in this regard shall be final, conclusive and binding upon the bidder.

Part –III: BID OPENING AND EVALUATION CRITERIA

1. Stages of Evaluation

There would be Three (3) stages for evaluation process.

The Stages are:

- I) Eligibility Criteria Evaluation
- II) Technical Evaluation
- III) Commercial Evaluation

2. Evaluation Methodology

The objective of evolving this evaluation methodology is to facilitate the selection of the most cost-effective solution (Total Cost of Ownership) over contract period that appropriately meets the requirements of the Bank.

2.1 Eligibility Evaluation:

The Eligibility would be evaluated first for the participating bidders. The bidders, who would qualify all Eligibility Criteria as mentioned in **Part-1, Clause 3**, will be shortlisted for the Technical bid evaluation.

2.2 Technical Evaluation:

The Technical Proposals of only those bidders shall be evaluated who have satisfied the eligibility criteria bid. Bank may seek clarifications from the any or each bidder as a part of technical evaluation. All clarifications received by within stipulated time shall be considered for evaluation. In case a clarification is not received within the stipulated time, the respective technical parameter would be treated as non-compliant and decision to qualify the bidder shall be accordingly taken by the Bank

The proposal submitted by the bidders shall, therefore, be evaluated on the following criteria:

| Parameter | Maximum Marks | Minimum Passing % | Minimum Passing Marks |
|--|---------------|-------------------|-----------------------|
| Bidder Credential Strengths | 100 | 50% | 50 |
| Technical and Functional features evaluation | 75 | 100% | 75 |
| Bidder validation of sizing based on their own current installations, workloads and performances | 25 | 100% | 25 |
| Bidder Manpower Credentials (Quality of manpower proposed submitted along with | 100 | 75% | 75 |

| | | | |
|--|----|-----|----|
| biodata) | | | |
| Bidder Technical Presentation by Program Manager for Infrastructure Program Manager for Application (Overall Solution Presentations) | 50 | 50% | 25 |

The evaluation/selection process will involve assessment of technical competence as detailed here below.

- i. A maximum of 350 marks will be allocated for the technical bid.
- ii. The evaluation of functional and technical capabilities of the bidders of this RFP will be completed first as per the following guidelines. The technical proposals only will be subjected for evaluation at this stage.

The bidders scoring less than 75% marks (cut-off score) out of 350 marks in the technical evaluation shall not be considered for further selection process and their offers will be dropped at this stage. Bidders should score 100% in Compliance to **Annexure D** (Technical features) and for rest of the evaluation Parameters, bidders should score a minimum as mentioned in the above table. Bidder fulfilling the parameters stated above shall be considered as technically qualified. Once the evaluation of technical proposals is completed, the bidders who score more than the prescribed cut-off score will be shortlisted for further tender process.

In case none of the participating bidders qualify on technical criteria by reaching or exceeding the cut off score of 75%, then the bank, at its sole discretion, may relax the cut-off score to a lower value.

The evaluation of technical proposals, among other things, will be based on the following. Bidder should provide all relevant supporting documents, certification from client and Biodata for L1, L2 and Program manager should be submitted along with bid.

| SL.no | Technical Evaluation | Evaluation Approach |
|-------|---|---|
| 1 | Bidder's Credential Strengths (Max Marks 100) | <ol style="list-style-type: none"> 1. Bidder should have successfully completed at least one supply & Installation of hardware, end-to-end migration, UAT/testing, implementation and maintain of Core Banking during the last ten years in at least one Public/Private Sector bank in India having a minimum of 1000 branches in India - 50 Marks 2. For the Second supply & Installation of hardware, end-to-end migration, UAT/testing, implementation and maintain of Core Banking during the last ten years in at least one Public/Private Sector bank in India having a minimum of 1000 branches in India - Additional 25 Marks |

| | | |
|---|---|--|
| | | 3. For the Third supply & Installation of hardware, end-to-end migration, UAT/testing, implementation and maintain of Core Banking during the last ten years in at least one Public/Private Sector bank in India having a minimum of 1000 branches in India – Additional 25 Marks |
| 2 | Technical and features evaluation (Max Marks 75) | The Bidder is required to submit the compliance for Annexure D and Scope of work Technical and functional requirements. Bidders should score 100% in Compliance to Annexure D and SOW. Note: Bidder should ensure that the all compliance against Annexure D and SOW non-compliance may lead to disqualification. |
| 3 | Bidder validation of sizing based on their own current installations, workloads and performances (Max Marks 25) | Bidders should score 100% Bank has given the year wise baseline datapoints and corresponding required sizing and hardware infrastructure. Bidder is required to validate given sizing including upgrade base on their own current installation, workload and performance and submit details document with justification. |
| 4 | Manpower Credentials (Quality of manpower proposed) (Max Marks 100) | <p>Experience of the Program Managers: - Should have Minimum 1 no. of Project Managers having 8 years of relevant experience in BFSI as Program Manager and out of which 5 years should have experience in Managing Migration , Implementation and Operations in Finacle in one or more Public/Private Sector bank in India having a minimum of 1000 branches in India – (30 Marks)</p> <p>More than Minimum 1 no. of Project Managers having 10 years of relevant experience in BFSI as Program Manager and out of which 6 years should have experience in Managing Migration , Implementation and Operations in Finacle in one or more Public/Private Sector bank in India having a minimum of-1000 branches in India - (40 Marks)</p> <p>Experience of the L2 Resources:- Should have more than 10 no. of L2 resources having more than five years of relevant experience in Finacle out of which 2 years should be in L2 Support and Customization for Finacle 10.x Core Banking Solution (Data base, application, Hardware) in at least one Public/Private Sector bank in India having a minimum of 1000 branches in India (25 marks)</p> <p>More than seven years of relevant experience in Finacle out of 3 years should be L2 Support and Customization for Finacle 10.x Core Banking Solution (Data base, application, Hardware) in in at least one Public/Private Sector bank in India having a minimum of 1000 branches in India (30 marks)</p> <p>Experience of the L1 Resources:- Should have more than 20 L1 resources having two years of relevant experience in L1 Support for Finacle Core Banking Solution(Data base, application, Hardware) in in at least one Public/Private Sector bank in India having a minimum of 1000 branches in India (20 marks)</p> <p>More than five years of relevant experience in L1 Support and Customization for Finacle Core Banking Solution (Data base, application, Hardware) in in at least one Public/Private Sector</p> |

| | | |
|---|---|---|
| | | bank in India having a minimum of 1000 branches in India (30 marks) . |
| 5 | Bidder Technical Presentation (Max Marks 50) | <p>The bidders of this RFP have to give presentation/ interactions before the panel of representatives of Bank on the methodology/approach, time frame for various activities, strengths of the bidders on such projects</p> <p>The technical competence and capability of the bidder should be clearly reflected in the presentation. If any short-listed bidder fails to make such presentation, they will be disqualified from the selection process. Bank will confirm the veracity of the claim in the presentation during the site visit and if not satisfied, bidder will be disqualified from the selection process.</p> <ul style="list-style-type: none"> ▪ Understanding of Bank's business and Operating environment (10 Marks) ▪ Demonstration of organization capability for the proposed initiative (5 Marks) ▪ Service Model demonstration (5 Marks) ▪ Deployment designed with Rack Space & power requirement (5 Marks) ▪ Demonstration of value proposition offered in the bid which shall enable the success of the project (5 Marks) ▪ Achieving Project timelines (10 Marks) ▪ Demonstration of at least two accelerators or value addition for the proposed solution that brings in distinct solution advantage or implementation time or savings in efforts (5 Marks) ▪ Offer EMS tools demonstration (5 Marks) <p>Note: Bank may conduct presentation through Video Conference, if required.</p> |

2.3 Commercial Evaluation

The format for quoting commercial bid set out in **Annexure – E**. The commercial bids of only technically qualified bidders will be opened and evaluated by the Bank and the evaluation will take into account the following factors:

- a. The Bill of Material must be attached in Technical Proposal as well as Commercial Bid. The format will be identical for both Technical Proposal and Commercial Proposal, except that the Technical Proposal should not contain any price information (with Prices masked). Technical Proposal without masked Bill of Materials will be liable for may rejection. Any deviations from the Bill of material/ non submission of prices as per the format shall make the bid liable for rejection.
- b. The L1 bidder will be selected on the basis of the amount quoted for the proposed solution as per commercial bid as per Annexure-E. Lowest quote based on Total Cost of Ownership (TCO) as quoted in Annexure–E, will be considered as the L1 bidder. However, in case of any discrepancy in calculation, unit cost for components & services shall prevail and TCO will be calculated accordingly.

- c. The quoted TCO (Total Cost of Ownership) identified in the commercial bid would be the basis of the entire outflow of the Bank for undertaking the scope of work.
- d. In case there is a variation in value between numbers and words; the value mentioned in words would be considered.
- e. In the event the bidder has not quoted or mentioned the component or services required, for evaluation purposes the highest value of the submitted bids for that component or service would be used to calculate the TCO. For the purposes of payment and finalization of the contract, the value of the lowest bid would be used.
- f. The bidder will be solely responsible for complying with any applicable Export / Import Regulations. The Bank will no way be responsible for any deemed Export benefit that may be available to the bidder.

3. Normalization of bids:

The Bank has discretion to go through a process of Eligibility evaluation followed by the technical evaluation and normalization of the bids to the extent possible to ensure that eligible bidders are more or less on the same technical ground. After the normalization process, if the Bank feels that any of the bids needs to be normalized and that such normalization has a bearing on the price bids; the Bank may at its discretion ask all the eligible bidders to re-submit the technical and commercial bids once again for scrutiny.

The resubmissions can be requested by the Bank in the following two manners:

- Incremental bid submission in part of the requested clarification by the Bank.
- Revised submissions of the entire bid in the whole.

The Bank can repeat this normalization process at every stage of bid submission or till the Bank is satisfied. The eligible bidder/s have to agree that they have no reservation or objection to the normalization process and all the technically short listed bidders will, by responding to this RFP, agree to participate in the normalization process and extend their co-operation to the Bank during this process. The shortlisted bidder/s, by submitting the response to this RFP, agrees to the process and conditions of the normalization process.

Part – IV

Scope of Work

Bank intends to select bidder for Supply, Installation and Maintenance of Hardware, Operating System and Facility Management Service for Finacle 10.X and FEBA with DEH.

4.1 The broad scope of the assignment would involve

- a) Supply, installation, commissioning and maintenance of following hardware, software and operating system (as per technical specification in Annexure D and below mentioned table A) at Primary site (DC), Disaster Recovery site (DR) and Near DR(NDR)site.

| Table A: Summary Sheet for minimum Hardware/Software/Solution requirement for Finacle 10.x and FEBA (Finacle Internet Banking Application) | | | | | | |
|--|---|--|---|----------|----|-----|
| Sl. No. | Used for | Processor Type and Platform/Type of Hardware / Type of solution | Hardware/Software/Solution | Quantity | | |
| | | | | DC | DR | NDR |
| 1 | Finacle 10.x CSIS MIS/Report, UAT, Training database (DB) | Processor for DB layer Latest RISC/EPIC type Processor from OEM IBM/Oracle/HPE for DB layer OS Platform AIX 7.2 level 0 service pack 1 or later OR Solaris 11.2 SUR | Production Database for Finacle 10.x Enterprise Class Servers to host Core Banking Database to support 4 node RAC | 4 | 4 | 0 |
| | | | CSIS & MIS/REPORT database for Finacle 10.x CSIS DB in 2 node Active Passive node MIS/Report DB in 2 node Active Passive node | 4 | 4 | 0 |

| | | | | | | |
|---|--|--|---|--|--|---|
| | | 5.5 or later SUR update OR HP Unix 11.31 Sep 2014 B.11.31.1409 or later | UAT/Training/Migration Database for Finacle 10.x Mid-range servers to host Non- production UAT (2 node RAC), Training, Migration, SIT DB server and other services as per bank requirement time to time. | 1 | 6 | 0 |
| | | Processor for App and Web layer X86 platform Intel Xeon Gold 6xxx @ 3.1 GHz or above with HT, Turbo Boosting OS Platform Red Hat Enterprise Linux (RHEL) Server 7.7 (64 bit on intel) | Production Application & Web for Finacle 10.x Enterprise Class blade Servers to host production C/C++ & J2EE Application layer, Web layer HTTPS, Web layer, MIS (App), CSIS (App) | 8 (C/C++) 4 (Uniser) 2(C24) 6(J2EE) 4(HTTP) 2(CSIS APP) 2(Report/MIS APP) 2 (Additional Report) | 8 (C/C++) 4 (Uniser) 2(C24) 6(J2EE) 4(HTTP) 2(CSIS APP) 2(Report/MIS APP) 2 (Additional Report) | 0 |
| | | | UAT/Training/Migration etc. Application and Web for Finacle 10.x and Finacle Assure Enterprise Class Rack Servers to host Non-production UAT, Training, Migration, SIT etc. . | | 2(C/C++) 2(J2EE) 2(HTTP) 1(Training) 1(Migration) 1(SIT/ Development) 5 (Finacle Assure) | 0 |
| | | | 3rd Party Software & Middleware license and its support service for Finacle 10.x For Finacle 10.x application server J2EE JBOSS EAP 7.1.2 (64 bit) with java-1.8.0-openjdk-1.8.0.191.b12-o.el6_10.x86_64 rpm with developer package For Finacle 10.x Web Server JBCS or Apache HTTP server version 2.4.23 with mod cluster 1.3.5 Final & Software load balancer between web and J2EE layer from JBCS or Apache HTTP Other subscription: Premium Enterprise support for RHEL, subscription with RED Hat to gain access of respective tar/zip download and Premium Enterprise support for above mentioned 3rd party software. | Bidder need to quote as per requirement | | 0 |
| 2 | | Processor for App and Web layer | Enterprise Class blade Servers for Finacle E- Banking | 2 | 2 | 0 |

| | | | | | | |
|---|---|---|---|---|---|---|
| FEBA DB, APP, WEB, DEH, FAS UAT environment | X86 platform Intel Xeon Gold 6xxx @ 3.1 GHz or above with HT, Turbo Boosting OS Platform Red Hat Enterprise Linux (RHEL) Server 7.7 (64 bit on intel) | (FEBA+DEH) Database to support 2 node RAC | | | | |
| | | Enterprise Class blade Servers for Finacle FAS Database to support 2 node RAC | 2 | 2 | 0 | |
| | | Enterprise Class Blade Servers Finacle Online + DEH Application Serve for Finacle E- Banking (FEBA) | 3 | 3 | 0 | |
| | | Enterprise Class Blade Servers FAS Application Serve | 2 | 2 | 0 | |
| | | Enterprise Class Rack Servers Web (HTTP) for Finacle E- Banking (FEBA) | 3 | 3 | 0 | |
| | | HA Proxy | 2 | 2 | 0 | |
| | | Enterprise Class Rack Servers for UAT for FEBA DB, Application, DEH,FAS, WEB | 0 | 4 | 0 | |
| | Software | Bidder needs to provide below mentioned third party Software and its support service during contract period: a. JRE 1.8 (DEH and Microservices) b. JBOSS EAP 7.1.2 (J2EE Application Server) c. Python 2.7 (Database Server DEH) d. JBCS or Apache httpd 2.4.23 (Web Server) e. Redis Server 3.2 with enterprise support (For distributed caching DEH and Microservices) f. Consul 1.0.3 & Consul template 0.19.4 (for communicating between Service Registry consul and Load balancer) g. Node JS 8.9.4 (Omni Channel REST APIs with node js based O-Auth Provider Within Omni Channel) & Qty: h. HA Proxy 1.8.3 (HA Proxy will be used for as a webserver/load-balancer for servlet application and load-balancer for Rest APIs. | As per requirement As per requirement As per requirement As per requirement 3 Master Instances DC & DR each location 3 Salve Instances DC & DR each location 2 UAT Instance at DR As per requirement As per requirement As per requirement | | | 0 |

| | | | | | | |
|---|---|------------------------|--|---------------------|---|---|
| | | | <p>Load balancer is mandatory for Rest APIs in OCH.HA Proxy would be needed to act as a load balancer for the DEH REST APIs which would be consumed by external applications like Mobile Banking, IVR etc. The load coming in to access the DEH REST APIs would be distributed using HA Proxy. For deployment of HA proxy bidder needs to factor additional 2 no. of X86 Type-8 servers with RHEL OS at each DC & DR location as per revised commercial BOM in corrigendum. HA proxy should deploy with high availability mode at DC & DR both locations.)</p> <p>i. Graylog 2.3.2 (consolidate logs for analysis)</p> <p>j. JRE 1.8</p> <p>k. JDK 1.8</p> <p>Important note: Selected bidder will have to download all the necessary third party software (both for Finacle 10.x & FEBA application) mentioned above and also as per Scope of work & Annexure D as advise by Application OEM time to time during contract period.. The selected bidder will be required to install same in respective servers in non-production, production (DC side) and also same in DR site where Finacle 10.x & FEBA application will be deployed.</p> | As per requirement. | | |
| 9 | Storage for Finacle 10.x, FEBA, Mobile Banking, GBM, LAPS etc. | All Flash type Storage | Enterprise Class Storage (all Flash) with RAID 6 support 500000 IOPS or above from day 1 for DC & DR Storage and 200000 IOPS and or from day 1 for NDR storage Usable Storage Space: DC:350 TB DR:600 TB NDR:10 TB | 1 | 1 | 1 |

| | | | | | | |
|----|--|---|--|---|---|---|
| | | | In all three sites mentioned above, effective usable capacity should NOT include effect of compression, de-duplication or thin provisioning for storage capacity and its scalability. The usable capacity should be clearly available. | | | |
| 10 | NAS for Finacle App layer | Enterprise Network Attached Storage (NAS) having all flash drives | All flash drives to support 50000 NFS IOPS/concurrent connection or above with response time of < 2 milliseconds having usable 20 TB (RAID 6) and minimum 65534 subdirectories for a given directory from day 1 | 1 | 1 | 0 |
| 11 | Disk based backup for instant backup and restoration | Enterprise class disk-based backup solution | Offered device shall be offered with Minimum of 150 TB of usable space scalable to more than 300 TB usable space. | 1 | 1 | 0 |
| 12 | Backup software for taking backup | Online backup of databases namely Oracle, SQL, DB2 and OS namely Windows, Linux, Unix etc | Online Backup Software for the proposed database servers and existing database server of other applications. 150 TB front end capacity licenses. | 1 | 1 | 0 |
| 13 | Tape Library for taking backup | Tape Library built with custom rack hosting accessor, tape drives and cartridge slots | Enterprise Tape Library with 200 LTO 8 Tape and Minimum No. of tape drives: 2 X LTO 7 FC drives and 10 X LTO 8 FC drives. | 1 | 1 | 0 |
| 14 | SAN Switch/Director for servers and Storage connectivity | Latest generation 32/16 Gbps SAN switch/Director FC Switches with, enterprise-class, high availability features | SAN Switches/director for DC and DR Site | 2 | 2 | 0 |
| 15 | Web and APP layer Application Delivery Controller (ADC) and Load Balancer Devices | Appliance base Citrix/RADWARE/F5 Application Delivery Controller (ADC) and Load Balancer appliance | High End Application Delivery Controller (ADC) and Load Balancer appliance for Finacle 10 (Web & App) and FEBA (Web & APP) in Active-Active mode. | 4 pair (HA) for production | 4 pair (HA) for production 1 for UAT | 0 |
| 16 | EMS tool | EMS tool solution | EMS tool covering features like call & helpdesk management, change management, patch management, asset management (DC, DR infrastructure and network devices) along with | Bidder needs to provide all OS, software, license and hardware for EMS solution. EMS tool covering features like call & IT service desk/helpdesk management, change management, patch management, asset management (DC, DR infrastructure and network devices) along with Server, database monitoring & network | | |

| | | | | |
|--|--|--|--|--|
| | | | <p>Server, database monitoring & network monitoring , overall reporting bank as a whole irrespective of any location</p> | <p>monitoring, overall reporting to bank irrespective of any location. Bidder should supply, install and maintain EMS tool related hardware & software at DC and DR both locations. However, EMS tools database should be in high availability mode at DC site only and whole EMS tool solution should be able to run from DR also during DR-Dill or in case of any exigency.</p> <p>Licenses requirement:</p> <p>Call/Helpdesk with Change management feature – 50 nos. of concurrent users.</p> <p>Additionally, bidder should implement call/helpdesk management solution such as way that branch/corporate office users should be able to access call management/helpdesk portal/URL for call ticketing/call lodge at any point of time and that should be attended by L1 & L2 support team for resolution accordingly.</p> <p>DC, DR infrastructure monitoring and Patch management for 500 devices.</p> <p>Middleware monitoring (JOBSS): 40 (DC & DR).</p> <p>Network monitoring and configuration automation for 8000 devices.</p> <p>Asset management for 8000 devices.</p> <p>Database monitoring 30 nos. of various application DB instances.</p> <p>Bidder needs to factor EMS hardware in such a way that any point time same hardware is able to handle the load from day one implementation and system resources should not go beyond 70% at any point of time during contract period. If any point of time during contract period system resources utilization goes beyond 70%, bidder needs to upgrade EMS hardware within 1 month without any additional cost to Bank.</p> |
|--|--|--|--|--|

- b. L2 Application support for Finacle 10 (Domestic & Overseas) for 2 years (if required may be extended during the contract period).

- c. L2 Application support for FEBA (Finacle Internet Banking Application) with DEH (Digital Engagement Hub) and Finacle Alert Service (FAS) for 2 years (If required may be extended during the contract period).
- d. L1 Application & helpdesk support for Finacle 10 (Domestic) for 1 years (if required may be extended during the contract period).
- e. Database (DB) Installation, Administration, troubleshooting and Maintenance. List of Database (DB) are: Finacle 10.x Production DB (Domestic & Overseas), FEBA with DEH & FAS DB, Mobile Banking DB, UPI DB, GBM DB, LAPS DB, RTGS DB, GST DB, CSIS DB, REPORT DBs, MIS (Finacle 10.x) DB, UAT DBs, Training DBs, Migration DB, Test & Development DBs, EMS DBs.
- f. Backup and Restoration solution implementation & Management.
- g. Supply implementation & maintenance of all proposed Hardware like Servers, Storage, SAN, backup solution, NAS, Disk base backup and Load Balancer (Hardware and Software) etc. and its Management.
- h. Supply, Implementation & management of Enterprise management Solution (EMS) mainly covering Monitoring & Reporting of system & Network, Server & Database monitoring & reporting, SLA management, Service desk manager, Call Management, Change Management, Patch Management and asset management system.
- i. Supply, Installation, configuration and administration of proposed Operating system and 3rd party software and Middleware software for Finacle 10 & FEBA at HTTP, J2EE and C/C++ layer at all App & Web implementation.
- j. Performance testing, load testing, stress testing, Benchmark testing of proposed hardware infrastructure, UAT/ functional testing, security testing & Pre and post data migration checking & testing using reliable testing tools through external testing agency.
- k. Integration of all proposed hardware & software for Finacle 10.x & FEBA implementation.
- l. Integration of Finacle 10.x & FEBA database with its application server & web server.
- m. Storage Migration with ZERO data loss at DC & DR location.
- n. Near DR installation, maintenance and monitoring.
- o. RAC implementation for Finacle 10.2.25 , FEBA with DEH and FAS database and its FM support.
- p. Work closely with application vendor for Finacle 10.x for smooth migration of the database from Finacle 7 database to Finacle 10.x database and Internet banking database to FEBA with DEH database.
- q. Bidder needs to factor Enterprise premium Support (24X7) and standard support for RHEL, JBOSS EAP and other 3rd party software mentioned in Annexure D for DC and DR location respectively.
- r. After Go live selected bidder needs to maintain environment (Production, Report, UAT, Training, development) of Core banking System & FEBA. If required Bank may ask successful bidder to create & maintain additional two environment for Core Banking Solution (Finacle 10.2.25 & FEBA) like report/Training/UAT during the contract period without any additional cost to the Bank.

4.2 Selected bidder will be required to supply , install and maintain hardware as per minimum sizing, configuration and business datapoint with recommended application response time mentioned in Annexure D .If required, bidder can propose hardware sizing over and above minimum sizing mentioned in Annexure D as stated above. Bidder should achieve successful benchmarking based on 3rd year data points (Table R, Annexure D) and during the benchmarking exercise for the all proposed hardware components the resource utilization should be less than 60%. If any short fall/performance degradation/unable to get response time during the benchmarking is observed, the selected bidder will be liable to pay benchmarking penalty of 2% of respective hardware component cost which could not remained within threshold of 60%. This penalty independent of Clause no. 9 (Liquidated Damage) and penalty against clause no. 8 (Service Level Agreement). In case any bidder is interested to participate this bid process, please collect business datapoint (Table R in Annexure D) by making payment of tender fee as mentioned clause no. 3 Part II in RFP.

The performance testing, load testing, stress testing, Benchmark testing of proposed hardware infrastructure, UAT/functional testing security testing & data migration testing will be conducted between date of Purchase Order and December 2020 and Tentative Go live date for Finacle 10.x & FEBA is March 2021. In case of exigencies, the target date for activities may get extended for maximum of 6 months.

4.3 All the servers as specified above must be physically separate servers, unless otherwise specified. Partitioning of any sort in the same machine will not be treated as separate server for this purpose.

4.4 Proposed DB servers should only be RISC/EPIC architecture-based servers from same OEM and should also support multiple logical and physical separated partitioning of servers, based on Bank's requirement from time to time.

4.5 Proposed application and web service should be x86 architecture-based servers and should also support multiple logical/virtual partitioning of servers, based on Bank's requirement from time to time.

4.6 In addition to the above indicative hardware procurement; Bank will augment additional hardware, storage space based on Bank's requirement from time to time at a price fixed as per Bill of Material and TCO of this RFP over a period of 5 years. For any future upgrades, Bank will use the price quoted in the Bill of Material as the reference price for arriving at the cost of newly required hardware or software on pro-rata basis and upgradation will be done by selected bidder/OEM only during contract period.

4.7 The proposed enterprise servers which will be delivered and installed by bidder to host Core Banking Finacle 10 :

Production Data Base Servers for Finacle 10x

Bidder need to provide servers on Unix platform for deployment of Finacle 10.x related Databases as mentioned below with high availability mode in 8 no. of physical server each DC & DR location of make & model IBM E980 or Oracle M8-8 or HPE Superdome 2.

- TYPE1 (RISK/EPIC based Server)- 4 no. of IBM E980 or Oracle M8-8 or HPE Superdome 2 (Annexure D) will be used for Core Banking Database with 4 node RAC from day one at DC & DR each location
- TYPE2 (RISK/EPIC based Server)- 4 no. IBM E980 or Oracle M8-8 or HPE Superdome 2 (Annexure D) will be used for CSIS DB and MIS/REPORT DB in active -passive mode at DC & DR each location
- TYPE3 (RISK/EPIC based Server) – 2 no. IBM E980 or Oracle M8-8 or HPE Superdome 2 (Annexure D) will be used for 2 RAC for UAT DB at DR site only
- TYPE3 (RISK/EPIC based Server) – 1 no. IBM E980 or Oracle M8-8 or HPE Superdome 2 (Annexure D) will be used for additional report DB at DC & DR each location.
- TYPE3 (RISK/EPIC based Server) -3 no. IBM E980 or Oracle M8-8 or HPE Superdome 2 (Annexure D) will be used for Training DB, Development DB, Migration DB at DR site only.

Bidder needs to install and integrate all hardware (Server, Storage, SAN, backup solution, disk-based backup, necessary cable), related OS and database for deployment of above-mentioned Database servers.

Production Web & Application server for Finacle 10x and FEBA DB & application & Web

Bidder need to provide servers on x86 (Linux) platform (Blade server and Rack) for deployment of below mentioned applications and web services at DC & DR location each site. All said server infrastructure should have encloser level redundancy.

- TYPE 1(x86)- Application layer server (C/C++) should be horizontal. Bidder should deploy 8 no. of node C/C++ Application layer (Requires Cluster File System through NAS) in Active-Active and Load Balanced with External Load Balancer at DC & DR each location
- TYPE 1 (x86)- CSIS Application server should be horizontal scalable. Bidder should deploy 2 no. CSIS Application server in Active-Active and Load Balanced with External Load Balancer at DC & DR each location.

- TYPE 1 (x86)- MIS Application server should be horizontal scalable. Bidder should deploy 2 no. MIS Application server in Active-Active and Load Balanced with External Load Balancer at DC & DR each location.
- TYPE-1 (X86)- Additional Report server Bidder should deploy 2 no. additional Report Application server and Web in Active-Active and Load Balanced with External Load Balancer at DC & DR each location
- TYPE 2 (x86)- Uniser Application server should be horizontal scalable. Bidder should deploy 4 no. node Uniser Application server in Active-Active and Load Balanced with External Load Balancer at DC & DR each location.
- TYPE 2 (x86)- - Application layer server (J2EE) should be horizontal scalable. Bidder should deploy 6 no. node J2EE Application layer (Requires Cluster File System through NAS) in Active-Active and Clustered with JBoss EAP - Network Deployment at DC & DR each location.
- TYPE 3 (x86)- C24 Application server should be horizontal scalable. Bidder should deploy 2 no. C24 Application server in Active-Active and Load Balanced with External Load Balancer at DC & DR each location.
- TYPE 4 (x86)- WEB(HTTPS) layer server should be horizontal scalable. Bidder should deploy 4 no. node HTTP layer in Active-Active and Load Balanced with External Load Balancer.
- TYPE 5 (x86)- FEBA+DEH Database should be with 2 node RAC.
- TYPE 5 (x86)- FAS Database should be with 2 node RAC.
- TYPE 5 (x86)- FEBA+DEH Application server should be horizontal scalable. Bidder should deploy 3 no. FEBA+DEH Application server in Active-Active and Load Balanced with External Load Balancer.
- TYPE 5 (x86)- FAS Application server should be horizontal scalable. Bidder should deploy 2 no. FAS Application server in Active-Active and Load Balanced with External Load Balancer.
- TYPE-6 (x86 Rack server) FEBA web server should be horizontal scalable. Bidder should deploy 3 no. FEBA+DEH web server in Active-Active and Load Balanced with External Load Balancer.
- Type-6 (x86 Rack server) Finacle 10.x UAT should be horizontal scalable. Bidder should deploy 2.no for UAT application (C/C++), 2 no. for J2EE, 2 no. for Web (HTTP) in Active-Active and Load Balanced with External UAT Load Balancer and 1 no. form FEBA+DEH web at DR site only.

- Type-6 (x86 Rack server) Finacle 10.x training & migration should be horizontal scalable. Bidder should deploy 1 no. for Training application (C/C++, J2EE & Web), 1 no. for migration application (C/C++, J2EE & Web) at DR site only.
- Type-6 (x86 Rack server) for Fin assure solution should be horizontal scalable. Bidder should deploy 5 no. of server at DR site only.
- TYPE-7 (x86 Rack server) HA Proxy should be horizontal scalable. Bidder should deploy 2 no. HA proxy server in Active-Active and Load Balanced with External Load Balance at DC & DR site both locations.
- TYPE-7(x86 Rack server) Finacle 10.x SIT/Development should be horizontal scalable. Bidder should deploy 1 no. for application at DR site only.
- TYPE-7(x86 Rack server) FEBA+DEH+FAS UAT should be horizontal scalable. Bidder should deploy 1 no. for FEBA+DEH+ FAS UAT Database & application each at DR site only.

Bidder needs to provide, install and integrate all hardware (Server, Storage, SAN, NAS, Load balancer, backup solution, necessary cable), related OS , database and third-party software , SSL certificate (WEB layer) for app & web (as per Application vendor recommended) for deployment of above-mentioned database , application and web servers, UAT, Training, Development and migration purpose as mentioned table A in SOW and revised Annexure D. Bidder needs to provide SSL certificate for Finacle 10.x Web(HTTP) service.

- 4.8 Bidder should supply, install, integrate, maintain, support and upgrade/update of hardware, related OS, database and application, 3rd party software use for deployment of production, UAT, Training, Development and migration as mentioned **table A** in SOW and **Annexure D**.
- 4.9 Bidder should take premium support care service form respective hardware and software OEM during Warranty and AMC/ATS period.
- 4.10 To support horizontal scalability of database servers in RAC environment, bidder should be able to supply the similar servers with equivalent performance and same operating system during contract period.
- 4.11 Bidder should supply, install new setup & integrate with old setup for migration of data. Bidder has to make sure the connectivity and integration of proposed storage solution with the existing IT Infrastructure running on HPE platform at Primary (DC), Disaster Recovery (DR) and Near site for data migration purpose.
- 4.12 Bidder has to install and configure NAS box in consultation with application vendor. Bidder has to make sure seamless integration of proposed NAS solution with the

newly proposed servers and storage, to support Finacle 10.x requirements, at Primary (DC) and Disaster Recovery (DR) sites. Bidder to extend necessary support to application vendor for the same.

- 4.13 Bidder has to install oracle database 12c or higher version of Oracle database in all proposed databases used for Finacle 10.x and FEBA servers at all the locations as per recommendation by Application vendor during contract period. Bank intends to implement 4 node Oracle Real Application Cluster (RAC) on proposed enterprise servers for Finacle 10.x production DB, 2 Node RAC for FEBA+DEH production DB , 2 node RAC for FAS databased and 2 node RAC in UAT DB environment, which will be implemented and maintained by the selected bidder only during contract period. Bidder needs to upgraded Oracle database to higher version as and when required by Bank during the contract period without any additional cost to bank. Bidder needs to coordinate and implement database conversion from single byte to multi byte in Finacle 7.x database (after migration old storage to new proposed storage) and migration from Finacle 7.x (Active -Passive DB) for Finacle 10.x (4 node RAC) and migration of Internet banking database to FEBA (2 node RAC) in consultation with Finacle 10.x & FEBA application vendor. All required Oracle database and Oracle RAC licenses will be provided by Bank.

Bidder need to setup 4 node RAC on the proposed hardware for Finacle 10.x production DB database along with DBA activity and maintain same during contract period. The broad scope is mentioned below:

- A. Setting up a UAT RAC environment using 12c or higher Grid Infrastructure
- B. Database Migration testing in UAT environment.
- C. Support for Application team to carry out UAT testing with RAC setup using SCAN Listener.
- D. Setting the production RAC setup and work closely with application vendor for Finacle 10.x for smooth migration of the database from Finacle 7 database to Finacle 10.x database
- E. Work with application vendor for Finacle 10.x in optimizing and tuning the environment.
- F. DBA activity and Facility Management services for all the Databases including RAC as mentioned in the RFP.

- 4.14 Bidder should supply, install, configure, fine-tune all the software & hardware at DC and DR sites that include instances of Production, Development, UAT, Report & Training environments as mentioned below:

- Third-party/middleware services/software required for Finacle 10 Application layers approved by Application vendor on x86 platform.
- Third-party Web services/software required for Finacle 10 Web layer approved by Application vendor on x86 platform
- Hardware Load Balancer for HTTP web server
- Hardware Load balancer for of Finacle core application server (C/C++).

- Software Load Balancer for application server (J2EE).
- Hardware Load balancer for FEBA APP and WEB.
- Third-party services required for FEBA & DEH approved by Application vendor.

- 4.15 Bidder should supply Backup Software Solution having 150 TB capacity base backup software and should support Full and Incremental, online & offline backup having capability of taking backups on LTO 8 Tape Drives at DC & DR location. Backup Software solution should have Industry standards encryption (256 bit or higher). Bidder has to install Backup software solution on all Production Database servers (DC & DR). Bank is using HP data protector backup solution for LTO4 & LTO5 tape backup, accordingly bidder should provide solution for migration/data restoration from bank's existing LTO4 and LTO5 tape.
- 4.16 Bidder should supply, install & maintain Enterprise class tape libraries at Primary site (DC) and Disaster Recovery site (DR) as per Annexure D.
- 4.17 Bidder need to provide 150 TB usable disk-based backup solution.
- 4.18 Bidder needs to deploy backup solution such a way that Core Banking database & other database should be always up during daily, weekly, monthly & quarterly backup process. To achieve this if any additional hardware and software required, then bidder need to factor as part of this RFP.
- 4.19 Successful bidder/ OEM should study existing environment and prepare detailed design documents for the deployment/installation of the proposed hardware & software. Bidder has to submit following documents:
- a) Installation / standard configuration documents of the proposed hardware and software.
 - b) Architecture diagram of proposed deployment with rack layout.
 - c) Installation document of the monitoring software & patch management software.
 - d) Application flow diagram.
 - e) Standard Operating Procedure documents for performing regular activities.
- 4.20 Bidder should deploy skilled engineers for the installation and maintenance of the proposed hardware and software at DC, DR and NDR. The bidder has to ensure the availability of implementation team till the installation and commissioning of the equipment/software has been completed and sign off is given by the Bank.
- 4.21 Post installation and commissioning activity at primary (DC), Disaster (DR) and Near sites, all respective validations should be checked, and reports need to be submitted to Bank for sign off successful installation.
- 4.22 All passive cablings between server-to-server, server-to-tape, storage-to-tape, server - to -SAN, Storage-to SAN (including and all other combinations connected) (for connecting between new-to-new or new-to-existing setup) will be provided and

installed/ configured by the bidder. The management of these cabling (including replacement whenever required) to be provided by the bidder during the tenure of the contract without any additional cost to the Bank.

- 4.23 Post implementation, scope includes support and implementing of the following activities from time to time: (a) Firmware Upgrades, (b) Faulty Parts replacement, (c) Hardware System monitoring, (d) Troubleshooting & Performance Tuning, (e) Operating System patches & Upgrades, (f) patches & Upgrades of supplied software, (g) Advisories on software upgrades & vulnerabilities, (h) Support during DR Drills, (i) Any support required to make systems & software up and running.
- 4.24 Scope includes resolving supplied hardware and software related issues during warranty and AMC/ATS period, including installation/reinstallation of OS and any other software supplied by the bidder, due to any reason what-so-ever for the above-mentioned hardware and software. It also includes installation / reinstallation of NAS during contract period without extra cost to Bank.
- 4.25 The support during warranty and post warranty period should be provided directly by respective OEM for server, storage and software. Bidder needs to provide MAF to the Bank for having back-to-back support arrangement with OEM, on OEM's letterhead for providing hardware and software support directly by OEM under both warranty and AMC/ATS period.
- 4.26 Bidder proposed OEM of storage has to migrate Bank's all Data from existing storage on XP9500 storage to proposed enterprise storage with zero data loss and data integrity at Primary (DC) and Disaster Recovery (DR) within the stipulated time frame specified by Bank. For this purposed any required software/tool utility to provide by selected bidder without any additional cost to bank.
- 4.27 Bidder's installation team has to ensure all the necessary connectivity (networking/cabling/zoning etc) for installation of new setup & integration of proposed servers and enterprise storage with the existing Core banking setup on HPE environment , which is currently available at both Primary (DC) and Disaster Recovery (DR) site for migration from Finacle 7 to 10.X.
- 4.28 All hardware and software provided under this tender should support IPv4 and IPv6 addressing from day one.
- 4.29 Bank has implemented three site Core Banking data replication using Oracle data guard between DC & DR and Storage base replication between DC to NDR. The same data replication has to be achieved by the bidder in all the three sites by implementing through ODG (Oracle Data Guard) between DC & DR and Storage base replication between DC to NDR to ensure zero data loss. Regarding this any additional license & hardware if required will be borne by bidder.
- 4.30 Presently Bank is using utility for Business copy / Report copy for making multiple copies of database instances at storage level. Similar utility should be implemented

by the bidder in the proposed enterprise storage solution both at Primary (DC) and Disaster Recovery (DR) sites to create multiple business/point-in-time copies.

- 4.31 The bidder should deliver the proposed hardware and software at respective delivery locations at Kolkata & Bangalore. Delivery, installation, commissioning of the hardware / software at all the three sites should be completed within 16 weeks from the date of purchase order.
- 4.32 Bidder has to make skilled resources available for installation, configuration and deployment of certified patches on proposed servers as and when they are released by OEM after taking proper precaution/approvals, as per Bank's requirement during the contract period without any additional cost to Bank.
- 4.33 Bidder has to provide certificate of assurance to Bank, on OEM's letter head for supply and upgrade of proposed hardware and software over a period of five (5) years and support for period of minimum seven (7) years.
- 4.34 All the parts of hardware items and software (OS and any other software provided under this contract) would be covered under comprehensive warranty/AMC/ATS except consumables. If there is any gap between Bank's requirement and OEM warranty/AMC/ATS, then it will be the responsibility of OEM to fill up the gap without any extra cost to the Bank.
- 4.35 Facility Management Service is to be provided at Bank's premises on 24x7x365 basis deployed for this purpose shall act as single point of contact with the bank for any matter pertaining to scope of work specified in the RFP.
- 4.36 Performance testing, load testing, stress testing, Benchmark testing of proposed hardware infrastructure, UAT/functional testing security testing & data migration testing using reliable testing tools through external testing agencies (maximum 2 agencies).

The following points to be considered by the bidder (through external testing agency) for testing:

- A. Upgradation & Migration testing of the DB should be carried out from the existing server to the proposed new setup.
- B. Stress testing of Finacle 10.X CBS application would be performed with migrated Database on the new proposed hardware to ensure no deterioration happened in the performance due to the server/platform change.
 - I. The bidder will be responsible for providing all tools required to perform stress testing with appropriate licenses.
 - II. The analysis must be carried out on all servers indicating
 - ✓ Resource utilizations like CPU/memory/swapping

- ✓ Benchmark testing application & hardware
- ✓ Transaction loads
- ✓ Success/Failure analysis
- ✓ Response time measurements
- ✓ Network throughput

- C. Get the application thoroughly tested on performance parameters of load, stress through concurrency etc. using reliable testing tools. The said test results shall be submitted to the Bank indicating the outer boundary of load and performance.
- D. To ensure that the application sustains a load of 39000 concurrent users
- E. Simulate the targeted load with the agreed load profile for the shortlisted scenarios on the applications from the front end through performance testing tool and measure performance of the application and its systems under test.
- F. To validate the application system stability and ensure there is no memory leaks and degradation over time when exposed to prolonged peak user/targeted transaction load.
- G. To validate the server hardware capacity to handle current and future workload (peak hourly and daily user/transaction load).
- H. Independent Testing Services Vendor will put Load on Front End branch module with help of Load simulator tool.
- I. All other channel transaction will be tested by hitting ISO Packets & other message format.
- J. Bank & bidder will initiate EOD & BOD and bidder will be monitoring hardware utilization in backend.
- K. Functional testing Finacle Migration testing for 10.x version and FEBA
- L. Functional testing Number of interfaces (100 interfaces during the engagement)
- M. Functional testing approx. 600-700 reports across applications
- N. Interfaces (Internal+ External) testing. Maximum 50 interfaces during the engagement.
- O. Automated procedure for EOD, BOD and UAT.
- P. Independent Testing Services Vendor will share the already prepared test cases to Bank (not less than 12000, negative & positives), which can be used to initiate execution. Main Activities during testing should be
 - Test Strategy Document
 - Test Case Development in UAT Environment
 - Test Calendar and timeline development
 - Deciding entry and exit criteria for each stage
 - Training and testing Bank team for Test Case Development and automation adoption
 - Execution of all test cases
 - Test Case result output with screenshot
 - Result vs. Test Case mapping

- Bug tracking and documentation
- Co-ordinating with application vendors to fix bugs
- Re-test the gaps, errors and bugs after rectification.
- Assist in Sign – off on the customization
- Assist in Sign – off on user acceptance test.
- Maintain a track of errors, bugs and customization requests and their resolutions.
- Explain bugs, errors and gaps to the Bank and application vendors.
- Re-test the gaps, errors and bugs after rectification
- Submit all documents on methodology, strategy, test cases, test documentation etc. to the Bank.
- Conduct unit testing, integration testing of the entire functionality of the solution.
- External testing agency and the bidder together will be responsible for end-to-end testing and UAT activities within scheduled timelines.
- All testing will be carried out with resources provided by the External agency in coordination with the bank.
- Acceptance testing shall broadly cover the testing of functionalities, migrated data (pre and post migration), and all interfaces to verify that the proposed solution conforms to the business & technical requirements and Gap analysis Report, Bandwidth and response time.
- Bidder must fix the bugs, carry out necessary rectifications and deliver patches/version towards changes which would be reported by external agency and the bank.
- Bank shall accept the application software (provided by the selected bidder) only after critical or major Bugs are fixed and are ready for production Implementation. However bidder needs to fixed bugs and problem with consultation of application OEM/OSD of Finacle 10.x and FEBA after GO live of Finacle 10.x and FEBA during application L2 support period.

4.37 The Bidder will be responsible to integrate all devices supplied in this RFP with bank SOC solution.

4.38 Any suspicious activities related to application & database should be immediately informed to the Bank and corrective actions have to be taken by the Bidder in concurrence with the SOC team to resolve the issue.

4.39 Bidder is required to perform security baselining, hardening, implementation of security related patches in OS or firmware before putting the application into production.

- 4.40 VA-PT and Application Security Testing would be done post implementation. In case of there is an observation by testing agency, Bidder is required to perform the necessary changes to comply to the security parameters and Requirement as identified by testing agency within stipulated timelines.
- 4.41 Bidder should conduct benchmark proposed hardware and benchmark needs to be validated & reported by a reputed independent third audit party who has experience in reporting performance benchmark specific to Core banking application.
- 4.42 The Bank proposes to conduct "User Acceptance Testing" ("UAT") for the Solution for the purpose of ensuring that all the functionalities requested for by the Bank are available and are functioning accurately. The UAT would be carried out for the Core Banking Solution and all the allied applications Upgraded by the Bidder.
- 4.43 Any deviations/discrepancies/errors observed during the testing phase will be formally reported to the bank and the Bidder will have to resolve them immediately or within the UAT approach and guidelines formulated between the Bidder and the Bank. The resolution timelines will be completely aligned to the project timeline of this RFP.
- 4.44 The Bidder will be responsible for maintaining appropriate program change control and version control for all the modifications/ enhancements carried out during the implementation/testing phase.
- 4.45 The Bidder will be responsible for providing and updating system & user documentation as per the modifications.
- 4.46 The Bidder is required to bridge the security gaps after taking appropriate approvals and concurrence from the Bank.
- 4.47 The Bidder should integrate the software with the existing systems as per requirement of the Bank and carry out thorough system integration testing.
- 4.48 The bidder should also conduct the functional testing to verify that each function of the software application operates in conformance with the requirement specification.
- 4.49 System integration testing will be followed by user acceptance testing for all applications.
- 4.50 Data testing with the help of automation tool on pre & post migration state of data is part of the scope of the testing agency. Testing agency will have to report on field level variances, if any.

- 4.51 Based on the contents of the RFP, the testing agency will be required to arrive at Test Methodology in consultation with the bank, based on a standard which is suitable for the Bank and perform UAT on behalf of the Bank.
- 4.52 The external testing agency will completely be responsible for end-to-end UAT.
- 4.53 Bidder has to study the load compute wise and during the performance load testing and generate the same load according to the projections provided by the bank to benchmark the hardware.
- 4.54 During Benchmarking, the load generated by the bidder has to be in accordance with the transaction mix and the current setup of the bank. The sign off should be taken from the bank.
- 4.55 Bidder needs to conduct benchmark on proposed hardware as per data input given in Annexure D Table R.
- 4.56 Stress Testing – Bidder needs to do stress testing during onsite implementation (Bank Premises) using the stress testing tool. Bidder needs to provide a report and take sign off from the bank before going live. Stress Testing needs to be done on all layers of the CBS setup and if any deviations are pointed out by the bank, bidder is to resolve the same before go – live.
- 4.57 Bidder along with the OEM needs to implement the recommendations provided by application Vendor after discussion with the bank.
- 4.58 Bidder need to conduct Finacle Application Performance tuning as and when required by bank during contract period. During this activity, bidder needs to study end-to-end application parameters, response time Configuration, landscape, channels utilization, menu specific response time etc.
- 4.59 The bidder will deploy engineers of the hardware and software for the installation. The bidder to ensure the availability of implementation team till the installation and commissioning of the equipment's/software has been completed.
- 4.60 Supply and integrate other applications/tools/solutions for configuration management, change management, release and deployment management, application performance monitoring, service level monitoring etc.
- 4.61 The warranty of hardware will start after completion of successful installation of operating system and middleware and after obtaining sign off from Bank. AMC/ATS will start post completion of warranty period of three/one years.

- 4.62 Bidder has to guarantee minimum uptime as per SLA for all systems supplied under this tender and should be ready to execute service level agreement for the same.
- 4.63 Bank will conduct VA & PT (Vulnerability Assessment & Penetration Testing) and Information Security audit on quarterly basis. The bidder/OEM needs to comply with the findings of the VA & PT. Accordingly, hardening activity or any other activity required for compliance of security audit should be carried out by the bidder/OEM as per the requirement of the Bank without any additional cost to the Bank.
- 4.64 The Bank reserves the right to shift the equipment to a suitable location during the contract period within Data Centre depending upon the need. The bidder will arrange to shift the equipment and install and commission the same without any additional cost to the Bank. However shifting the equipment to a suitable location outside datacenter during the contract period will be decided with mutually agreed terms and condition at that point of time. The de-commissioning and commissioning activity is required to be carried out by bidder Engineers only.
- 4.65 Bidder to provide administration training (professional classroom training on UCO Bank deployment setup) by Onsite Engineers for minimum 5 days to 20 Officials at UCO Bank site on the following:
- Server Virtualization/ Cluster setup
 - System Management and Control
 - Monitoring and Patch Management software
 - Backup Software
 - Application server software
 - EMS Tool
- 4.66 Bidder has to provide soft copies of User & Technical Manuals, Configuration Documents, Standard Operating Procedure, Deployment architecture for all the supplied hardware and software for this RFP.
- 4.67 Bidder has to follow worldwide practice and international standard for documentation for the entire system development life cycle. The documents and manuals should be kept up to date with proper version control during the entire contract period. Bank may require the bidder to deliver the following documents in hard and soft copy to Bank during development and implementation of the solution.
- Detailed System Requirements Specification Document
 - High Level architecture document
 - High Level Design document
 - Low Level Design document
 - Test cases with results during UAT, SIT and any other test cases
 - Deployment plan document
 - Change management methodology document
 - Security guide

- User management guide
- Release notes
- Impact matrix
- Standard Operating Procedure document for all processes mentioned in this RFP.

- 4.68 The bidder shall ensure seamless integration of the upgraded Core Banking Solution with other existing applications/utilities, network, security, platform and storage infrastructure in the Bank's Data Center, Near Site and Disaster Recovery Site.
- 4.69 Bidder will do the partitioning of the production Finacle core banking application database and FEBA with help/recommendation of Application vendor as and when required, however bidder needs to relook the same and need to maintain and perform activities to increase the performance of the database and application.
- 4.70 Bidder has to provision adequate number of technically qualified and experience resources for this project and the same needs to be provided in the Bill of material.
- 4.71 Bidder has to ensure that these resources are well versed with the Bank's specific functionality / Interface and customizations for the smooth rollout Support.
- 4.72 Bidder need to ensure that Report, UAT and Training environment need to be in sync with Production environment in terms of data and script. All the customization / enhancement / products / parameter change needs to be applied in these environments on periodic basis which should not be greater than 7 days for training & UAT and report server sync with production on daily basis. Bidder needs to ensure that all the data such as customer information and balances needs to be masked before releasing the Non-Production environment to the end user as and when required. Non-Production environment here refers to UAT, Development and Training.
- 4.73 As per the new architecture of the Finacle 10x bank intend to put Application Delivery controller (ADC) & load balancer at web and app layer of Finacle 10x and FEBA. Proposed load balancer configures such a way that its will be used for load balance of traffic of web and application layer both in same appliance in HA mode.
- Bidder should supply, install and maintain 4 pair of hardware load balancer with Application Delivery controller (ADC) at DC & DR each site, used for HTTP & C/C++ Application layer for Finacle 10.x and Web & Application layer for FEBA (Total 8 no. at Dc & 8 no. at DR).
 - Load balancer should be a physical box and not any kind of rapper of software installed on any web or application server.
 - Load Balancer should support all the algorithms like Round Robin, Weighted Round Robin, Least Requests, Session Persistence, server load, all other algorithms, if any.
 - Load balancer propose by the bidder must compliance with the technical specification mentioned in the Annexure D

- Load balancer should be capable of handling concurrent traffic request as mentioned in Annexure D.
- Bidder has to supply, install, commission, implement and maintain the devices and the license procure till the end of the contract period.
- It should not be a single point of failure at any point of time and bidder need to factor load balancers in HA mode.

- 4.74 The bidder should provide enterprise class storage at DC, DR & Near DR. Bidder proposed enterprise class storage should be compatible with proposed Near DR storage for sync replication with zero data lose. However, in case of NDR, if downtime is due to Network link failure then the same will be considered as exclusion.
- 4.75 Bidder should make do necessary server setup to enable Monthly MIS/Report and daily MIS/Report for data extraction for various peripheral systems like Audit MIS-ADF, AML etc.
- 4.76 The bidder should integrate the proposed storage at DC & DR with the bank's existing enterprise storage and old tape library meeting the zero data loss during storage migration time.
- 4.77 All the hardware provided by the bidder for Finacle 10 & FEBA with DEH to be fully redundant & scalable. All the components within the server should be hot swappable or pluggable and should incur no downtime due to component failure.
- 4.78 All the hardware should have dual power supplies, redundant NIC, IPv6 Compliant, and redundant HBA card, as applicable. The power input to the power supplies will be from separate UPS. In case of failure of one power supply, the second power supply should be able to take the full load without causing any interruption in services.
- 4.79 Bidder should provide Knowledge transfer (KT) to Bank's team quarterly basis. Bank will review same as and when required.
- 4.80 According to the new enhance functionality of the Finacle 10x a Network Attached Storage is required to leverage the continuous session functionality even if any of the app or web server goes down. Bidder needs to provide NAS considering following factor:
- NAS has to be sized according to the number of concurrent user of 50,000.
 - NAS will be used for locating all the user level file (download / upload, trace files, reports etc) in worst condition no file should take more than 2 ms time.
 - NAS has to connect with app server through 10 Gbps card
 - NAS has to be factor for both DC and DR location.
 - The max retention period for the user level files will be 180 days so bidder need to size the NAS accordingly.
 - Meta Data of NAS has to be store on SSD for better throughput.

4.81 After Finacle 10.x and FEBA GO LIVE bidder need to perform the DC DR Drill in totality within in coordination will all other application vendor of the bank. Following points should be cover:

- Bidder need to perform minimum of 4 DC-DR drill in each year (at least once in a quarter) during the contract period and as per the discretion of the bank as and when required.
- Bidder needs to allocate adequate resources, do project management and work closely with the Bank's team for performing the DR Drills whenever planned by the Bank.
- Any configuration level changes which can impact the DC-DR drill needs to be informed to Bank team before hand to avoid issues during the Drill.
- During DC-DR drill, bidder need to allocate appropriate resources onsite to avoid any failure and delays which will be penalized appropriately as mentioned in the Service Level of RFP.
- Bidder need to perform project management and all reporting and pre and post environment preparation to avoid any failure in the drill.
- Maintain and update Business Continuity plan Maintaining updated disaster recovery plan.
- Maintain and update disaster recovery plan.
- Ensure successful replication between production and DR and NDR.
- Notifying Bank promptly if a Disaster recovery scenario/condition arises
- Assisting Bank in execution of DR plan in such scenario
- Perform periodic recovery testing
- Developing and executing test plans as per defined periodicity or as and when required
- Documentation for Business continuity plan, Business continuity strategy plan & Roles and responsibility matrix for bidder's DC and DR team
- Coordinate with all the users involved in DR testing
- Track and report DR test results.
- Develop an action plan and timeline to address DR testing results.
- Implement DR action plans and provide ongoing status reporting until completion of all action items.
- Initiate the DR plan for Bank in the event of Bank declared DR situation as per Bank Disaster Recovery policies and procedures.
- Coordinate with Bank and third parties during a DR situation as per Bank Disaster Recovery policies and procedures.
- Bank can also do an unplanned DR Drill which bidder needs to support and design the system accordingly.

4.82 **Facilities Management (including AMC, ATS, L1, L2 support and other support services)**

- The Bidder will be the Single Point of Contact and responsible for Facilities Management Services, Warranty AMC and ATS for all components, hardware, software, application etc., supplied in this RFP. Facilities Management Services should cover
 - Finacle 10 (Domestic & Overseas and FEBA application management: L2 support (2 years)
 - Finacle 10 L1 support for 1 years.
 - System & Database Administration and maintenance.
 - Database performance tuning every 6 months during the contract period.
 - FM support for Core Banking DB, CSIS DB, MIS/Report DB, FEBA & DEH DB, Tools DB and all UAT & training DBs for Finacle 10.x and FEBA-DEH from day one.
 - FM support Overseas Core banking Database (DB) , Mobile Banking DB, LAPS DB, GBM DB, RTGS DB, GST from 1st January 2021.
 - Backup and Restoration Management and FM support
 - Hardware, Servers & Storage, SAN, NAS, Load balancer, Finacle 10 and FEBA Middleware and OS Management, and FM support
 - EMS tool software management and FM support
 - Management and FM support of all other hardware and software supplied under this project.
- Application maintenance would include installation, re-installation, troubleshooting, performance tuning, performance monitoring, applications of patches, bug fixing, improvements in presentation and / or functionality during contract period. Application Management Services team should provide support to all applications & modules referred in the RFP.
- The personnel being deployed by the Bidder for critical, key activities of Facilities Management Services at the Bank should be employees of the Bidder's firm. In any case, the Bidder is completely responsible and should duly meet the SLA requirements of the Bank as stated in the RFP.
- The support coverage would be for all the application / Solution / Hardware supplied by the Bidder through this RFP.
- The bidder should act as a Single Point of Contact for all internal users whether for service requests, incidents or problems for all the applications / solutions / hardware provided / taken over / supported by the Bidder by way of this RFP.
- Bidder should deploy competent resources for the team to provide necessary maintenance and support as per the requirement of the Bank. Bidder has to deploy adequate resources to ensure that the systems are up and customer service is not impacted. To ensure that the SLAs are met, the Bidder if required will need to deploy additional resources during the contract period including

implementation schedule without any additional cost to the Bank. The Bank has a right to interview and reject resources deployed by the Bidder.

- Facility Management team should be available on-site and would resolve day-to-day production issues reported in all in applications / hardware by debugging and analyzing the same.
- Upon intimation of the issue from the Banks' Team, the Facility Management team would analyze the issue and provide the necessary solution /Patch as per the SLA.
- Bidder's support team would liaison with the ATS / AMC team of OEM Bidder to report product related bugs, parameters and obtain & apply the fixes (if applicable) for the same in consultation with Bank.
- Bidder needs to note that the products and solutions proposed by the Bidder by way of this RFP should come with warranty of 3 Years for Hardware and 1 Year for Software. Thereafter, the Bidder should provide AMC/ATS for these products and solutions during contract period.
- In case, the resource deployed by the bidder is unable to continue during contract period, it will be the responsibility of bidder to provide similar resource within 7 days.

4.83 L1 Service Desk for application Finacle 10.x

Level 1 (L1) Service desk would need to be setup at the Banks' premises on all working days of the Bank between 7 am till End of Day of the last branch and system. Bank's end user will call the Bank's CBS Team and Bank's CBS Team will route the call to Bidder L1 Service Desk service desk. Bidder L1 service Desk will provide all kind of support, information and non-functional information, ticket routing to Bank's CBS Team.

The Bidders should include the complete cost of the L1 helpdesk for the entire 1 years as part of the Commercial bid. Same may be renew after completion of successful competition of L1 support.

The support staff in the L1 helpdesk must have a minimum relevant experience of two years each in Finacle CBS . The Bank reserves its right to replace the L1 staff, in stages or in full, over a period of time with that of if own team or another appoint Provider, in which case bank will discontinue payments in respect of the replaced staff.

The Bank reserves the right to increase or decrease the number of seats at L1 helpdesk depending on its requirements at the Bank. The Bank also reserves the right to change the locations of helpdesks at its discretion. The Bidder is expected to quote a per seat rate, which shall be used in case the Bank orders for lesser or

more number of seats at the L1 helpdesk. The Bidder should also note that the setup at the L1 helpdesk must provide for 1 supervisor to monitor the Helpdesk activities.

The Bank expects the Bidder to provide for L1 support for all activities and services that are part of scope. Bidder shall at minimum deploy the resources as per the minimum deployment level specified. Bidder should independently arrive at the sizing and deployment plan to meet the RFP requirements (as per scope of work and SLAs), adhering to the minimum deployment level. Bidder shall deploy resources at no extra cost if the proposed deployment does not meet the RFP requirements and SLAs.

The key activities that the SI is expected to perform as part of Level 1 Helpdesk Support are:

- Assessment in case of specific rights assignment
- Provision for assigning user rights only for certain fixed period
- Periodic user right monitoring (at known frequency) must be specified and implemented.
- Categorization of requests into functional clarification, bug or change request and route the ticket to the right team.
- Functional clarification to be provided by Level 1 support itself.
- Bugs & change requests to be logged and reported for further processing
- Provide telephonic and / or electronic mechanisms for problem reporting requests as well as for service and status updates.
- Escalate/assign unresolved issues to L2 helpdesk
- L1 support team will be responsible for first level of trouble shooting for all the applications, hardware / infrastructure components, links etc. taken over / supported by the Bidder or provisioned by the Bidder through this RFP.
- L1 support team needs to assign unresolved calls to L2 support team and follow up for resolution.
- L1 team also has the responsibility to provide the solution to end users after taking the same from L2 team and close the call with appropriate comments.
- Bidder has to leverage the functionality of EMS tool and provide the system uptime / down time/ Call response time / No of call attended report every month.
- Bidder has to maintain SLA defined for L1 helpdesk.

Bidder needs to provide a menu driven start / stop of application services, which the L1 team will use for refreshing the services as and when required and monitoring their status. All the necessary documentation and training needs to be provided by the Bidder to the L1 team for handling the required support activities.

4.84 **Level 2 (L2):**

- Level 2 (L2) Service desk would need to be setup at the Banks' premises covering 24x7x365.
- The Bidders should include the complete cost of the L2 support for the entire 2 years as part of the Commercial bid. Same may be renewed for a further period with existing terms and condition including cost at the discretion of the Bank.
- The support staff in the L2 helpdesk must have a minimum relevant experience of five years. Bidder should independently arrive at the sizing and deployment plan to meet the RFP requirements (as per scope of work and SLAs). Bidder shall deploy additional resources at no extra cost if the proposed deployment does not meet the RFP requirements and SLA terms.
- As part of L2 support, Bidder needs to perform the below activities:
 - The Bidder is expected to act upon the tickets routed from Level 1. The SI has to be proficient and ensure professional personnel are placed to handle the L2 support and resolutions are provided on a proactive basis.
 - Provide continuous onsite support for the all applications being implemented / taken over / supported / procured through the Bidder.
 - Performing and troubleshooting End of Day, End of Month, End of Quarter End of Year activities and other activities like batch job execution, bulk transactions/uploading, interest application etc.
 - Resolve calls within stipulated timeframe as defined in the Service Level Agreement.
 - L2 team has to support all internal and external interfaces in Core Banking Solution (NEFT, RTGS, CTS, LAPS, GBM, ADC channels, FI , Swift etc.) and needs to do trouble shooting, customization etc. at CBS end for smooth functioning of day to day operation of the Bank.
 - Bidder L2 team need to support all the hardware and software as part of this RFP.
 - L2 team needs to support the all customization including Bank customization and troubleshooting of all in scope applications and their interfaces.
 - Provide on-site trained personnel in each L2 shift, having adequate exposure and background on the solutions for problem handling and resolution
 - Coordinate with the L3 teams of respective application service providers for resolution and provide necessary information as may be required by the team to resolve the issues.
 - Bidder has to maintain SLAs defined in for L2.
- Bidder has to leverage functionality of the EMS tool to provide call response time of L2 team.

- Escalate the unresolved calls as per escalation matrix defined by the Bank.
- Provide timeframes for providing a solution of resolution of the escalated calls.
- Prepare Root Cause Analysis document with the root cause and resolutions provided for major issues such as:
 - Problems which have resulted in complete service disruptions or downtime
 - Critical production issues such as incorrect interest application in majority of the accounts, frauds done using the system, inconsistent accounting or system behaviour.
 - Delayed response times
 - Data / table corruptions
 - System Performance issues (high utilization levels)
 - Decide on preventive maintenance schedule with the Bank
 - Others environmental issues relating to Hardware and Software.
- Liaise with the L1 support personnel for the call information and resolution.
- Application database , middleware and third party software support need to be fully provided by bidder and adequate number of resources need to be factored.
- Bidder needs to commission, decommission, install, uninstall and support the middleware software from all aspects.
- Modifications to existing scripts, reports, MRT, JSP or any other scripts due to errors / technical faults , if required, with mutual discussion with the Bank.
- Report to Bank management on the critical issues reported, resolved, solution provided and the suggested recommendations or best practices on a monthly basis.
- Perform performance tuning of the applications mentioned in the Scope of Work of this document including database tuning. The Bank expects the Bidder to provide advice and points to be considered to the SI for performing any hardware/OS tuning required as part of the performance tuning.
- Perform Application (Finacle , FEBA & FAS) configuration replication across the Data Centre and Disaster Recovery Centre.
- The Bank reserves the right to increase or decrease the number of L2 resources depending on its requirements at the Bank. The Bank also reserves the right to change the locations of helpdesks at its discretion. The Bidder is expected to

quote a per resource price. The Bidder should also note that the setup at the L2 helpdesk must provide for 1 supervisor and/or 1 support personnel from the Bank.

- Bidder should perform daily/weekly/monthly backup for all system which will be integrated with proposed backup solution.

4.85 Level 3 (L3) for application

L2 resources of the Bidder is responsible to co-ordinate with the L3 resources of respective Application's OEM in consultation with the Bank.

4.86 Hardware Management (Servers, Middleware, storage etc.)

- As a part of FM, the Bidder shall provide services relating to maintenance and support to server hardware and other infrastructure supplied for the entire contract period.
- The Bidder shall provide for maintenance of Hardware, including preventive Hardware support, as well as repair and / or replacement activity after a problem has occurred, Firmware upgrade, patch update, OS version upgrade , Warranty/AMC service management, including coordination and vendor management.
- The Bidder shall provide a single-point-of-contact to Bank for the resolution of Hardware related problems or to request an equipment upgrade or consultation.
- If the Hardware supplied by the Bidder is to be replaced permanently, the Bidder shall replace the equipment of same Make/ Model/configuration or of higher configuration. However, the Bank may accept different make/model/ configuration at its discretion if the original make/model/ configurations are not available in the market due to obsolescence or technological up gradation, stoppage of the production of the same make/model/ configuration by the MANUFACTURER or cessation / winding up of the Company. The price benefit if any gained in the process by the Bidder, is agreed by the Bidder to be passed on to the Bank.
- Bidder shall provide Hardware maintenance services including preventive maintenance (e.g., running standard diagnostics, machine cleaning, checking cables and ports), corrective maintenance to remedy a problem, and scheduled maintenance required to maintain the Hardware in accordance with manufacturers' specifications and warranties.
- Bidder shall co-ordinate warranty repair or replacement service for the Hardware and process warranty claims, as applicable.
- The Bidder agrees that if the faulty equipment are required to be taken outside the Bank premises, the cost of transportation and other related costs will be borne by the Bidder.
- Bidder shall maintain accurate documentation on the current location and status of Hardware in the process of being repaired.

- Bidder shall provide maintenance data, as reasonably requested by the Bank, to support replacement / refresh scheduling.
- Bidder shall provide monitoring interface to problem management process of the Bank.
- Bidder shall provide support and assistance, as required, to isolate complex operational and software problems.
- Bidder shall update and provide the information required for the Bank to update the proposed asset management system.
- Bidder shall track and report Mean Time between Failures (MTBF) for Hardware.
- Bidder shall backup, remove, protect, and to restore programs, data and removable storage media in a machine prior to presenting the machine for service.
- The Bidder shall provide all maintenance services in accordance Service Level agreement mentioned in RFP.
- The Bank will not be liable to pay any additional amounts in respect of any sort of maintenance required during the tenure of the contract.
- Server Planning:
 - Configuration Management
 - Performance Management
 - Capacity Management

4.87 Hardware Management

- Managing the incident through service restoration
- Validating severity classification of the problem
- Determining the scope of the problem
- Facilitating the Service Recovery Team meeting
- Escalating the issue as required
- Conducting Root Cause Analysis
- Preparing restoration plans
- Proactive Monitoring of hardware and software during in-scope service hours
- Administer and/or execute Service Management processes and procedures
- Perform basic problem determination on systems and components managed by Bidder which include:
 - Hardware problems
 - System software problems
- Evaluate planned changes to the server environment and advise requirements to support such changes
- Provide server configuration reports and configuration details to the Bank as requested
- Implement configuration management processes and procedures

- Maintain an audit trail of server configuration changes as resulting from release and change control processes.
- The required software agents are to be installed, configured and monitored.
- Provide guidance to the bank and industry best practice for the optimal configuration of the operating system environment
- Produce and maintain installation and configuration diagrams of all installations
- Actively manage and report on the availability of all servers.
- Perform server periodic checks, monitoring and performance tuning.
- Communicate any service issues or implementation concerns with the bank and appropriate support personnel and/or bidders.
- Monitor hardware and system software status, process status, and take necessary action based on detected problems or issues as provided in this schedule.
- Provide problem escalation and interact as necessary with third party suppliers.
- Provide monitoring and troubleshooting for the server environment
- Provide timely notification and escalation to on site personnel if any hardware and software conditions exist that must be resolved on site to meet the service levels provided in this schedule.
- Bidders will ensure appropriate resources are on site to ensure service levels are achieved if recovery or actions are required.
- Propose tools for operations such as monitoring, deployment and configuration etc.
- Ensure server access is secure and authorized.
- Management of logical access to the server environment in accordance with the bank's policy (including administrator \ root access)
- Assist the bank with application support requiring operating system changes or access
- Evaluate the impact of new operating system upgrades or releases on existing applications and performance.
- Install patches as and when these become available, per bidder instructions for security exposures and Operating System bug fixes deemed critical by the bidder.
- Monitor status of system processes
- Monitor and respond to system alerts and events
- Monitor and respond to hardware alerts and events
- Monitor and maintain system error logs
- Performing required batch setup activities (ad hoc requests)
- Monitoring and responding to application alerts
- Monitoring and responding to application file system space issues
- Manage non-root application file systems
- Modifying file system sizes
- Shifting of servers within the premises and reinstallation and configurations including cabling and asset labelling
- Configure the disk storage arrays

- Execute backup and recovery procedures
- Retrieve archived tapes and restore required files and data sets
- Performing mock system failure and then data restoration drills on periodic basis
- Ensure the configuration of operating systems is in line with standards and policies as defined by the bank
- Document and track all configuration management problems using the site change management process.
- Co-ordinate all changes through the site's change management process.
- Configuration management for operating system release levels, patches and status.
- Perform routine system operation functions and system console operations actions such as power on/off, system reboots, and start/stop/reset.
- Apply preventive and corrective maintenance to all system level software (operating system and other non- application software).
- Install and upgrade all system level software (the operating system and other non-application software).
- Escalate hardware related malfunctions to the hardware supplier for resolution as provided in the bidder maintenance contract
- Inventory information about hardware shipping and receiving, raised floor space requirements, equipment placement, cabling, fibre, connectivity details, power and earthing requirements
- Servers/Storage hardware maintenance and support is based on various maintenance levels.
- Alert the bank about hardware changes that may impact application execution in support of the bank's application testing.
- Design back-out processes to return to the former hardware configuration if unforeseen problems occur during installation.
- Co-ordinate the scheduling and installation of supplier- recommended preventative maintenance and other hardware specific changes.
- Schedule down time as and when required to perform required hardware preventative maintenance, installation and testing.
- Design, build, schedule, and implement a hardware refresh template.
- Configure operating systems at the setup of each server, to establish super user privileges and access rules and establishing other standard guidelines, based on the agreed security policy of the bank
- Establish the process and procedures for requesting logon IDs and OS system level access
- Create, modify, and delete system logon IDs using the Change Control Procedure
- Monitor and maintain accounts and IDs and their designated privileges or access to make certain only active, authorized IDs have access, based on the agreed security policy.

- Remove inactive or suspended IDs after a specified amount of time, based on consultation with security administration and the bank's using the Change Control Procedure
- Adjust and maintain operating system and security software parameters for password expiration, available in the specific operating system environment to meet the agreed security policy requirements
- Provide processes and procedures to maintain operating system data protection options.
- Perform bi-annual re-verification of data owners, authorized submitters and logon IDs, existing level of privileges, based on input from the bank and system security configuration.
- Work with the bank's application support personnel as reasonably required for the monthly/Quarterly reviews and maintenance of inactive user id's
 - Compile a list of defined user id's on the Operating System, and provide list to the bank
 - Perform reviews of system, monitoring and database administration user id definitions.
 - Bidders will apply the necessary changes as per the outcome of the review.
- Hardening of servers as per bank's policy
- Anti-virus scan and anti-virus update on the servers
- Bidders will delete the bank's application user id definitions, once such a request has been forwarded by the bank.
- Bidder to update virus related signature files on servers to manage the removal of malicious code.
- Support and ensure that the timely installation of updated signature files and anti-virus software patches on all servers within the managed environment occurs.
- Coordinate with Bank's SOC team for receiving the most up-to-date information on malicious code outbreaks and the appropriate software signature files to protect against malicious code.
- Obtain and release signature files for testing and application into a client dedicated environment.
- Signature file and patch updates to be made available and installed utilizing the bank's change control process.
- Testing of signature files are to be performed prior to deployment.
- Perform pre-production scans to identify potential security risks on a server prior to entering the production environment.
- Review the results of vulnerability scans and determine corrective actions based on the results of the scans
- Review the results of penetration testing and determine corrective actions based on the results of the scans.
- Review government and supplier bulletins and various other sources to identify emerging threats or vulnerabilities to the bank's hosts.

- Maintain the risk evaluation process of vulnerabilities in which mitigation plans are determined, in accordance with the agreed security policy.
- Maintain a vulnerability correction process to correct vulnerabilities detected through scanning of servers.
- Maintain a vulnerability correction process as new vulnerabilities are identified.
- Correct known vulnerabilities detected within the scope of the Bidder's responsibility, using the appropriate correction and change management processes
- The agreed security policy is to form the basis of security level.
- Maintain processes to provide consistent configuration of parameters for logging devices and ongoing maintenance of those parameters.
- Make certain of adequate retention of security event logs, based on the agreed security policy.
- Configure the parameters of the administrative tools for all system hosts, in accordance with the agreed security policy.
- Will provide event logging to the extent that tools, resources, and storage are available on client owned environments
- Ensure sufficient storage capacity available to retain logs
- Provide a listing of resource access rules for re-verification purposes
- Perform quarterly review all user ID's and forward list of ID's not used for the last 6 months to the bank for permission to delete these ID's.
- Process security data identifying logged or audited access to a resource.
- Process security data identifying attempted access to a protected resource.
- Process security data identifying password violation attempts.
- Process security data identifying usage of emergency ID's.
- Monitor and maintain ID's and their designated privileges or access to make certain that only active, authorized ID's have access.
- Adjust and maintain operating system and security software parameters, consisting of password expiration, available in the specific operating system.
- Provide performance management functions and establish performance monitoring thresholds for major processes.
- Proactively identify performance problems and improvements
- Provide capacity planning processes, for short term and long term planning, forecasting resource requirements, and analyzing and reporting resource trends.
- Monitor server utilization, CPU usage and I/O activity, produce capacity projection reports and develop plans for improvements.
- Review server capacity and advice where future additional capacity may be required or archiving policies need reviewing or implementing.
- Use standard operating system utilities and/or other third party tools where appropriate, to project the effects of new changes and workload changes or when large configuration changes are performed in the environment on request of the bank.

- Perform operating system software tuning/optimization as required to maintain day-to-day operations
- Provide, install and maintain performance monitoring software.
- Maintain system parameters to manage subsystem performance and workload throughput.
- Implement changes as necessary to optimize the effectiveness and efficiency of the server platform.
- Analyze system resource and storage utilization.
- Perform capacity trend analysis.
- Perform capacity modelling.
- Capture capacity usage for the last 12 months.
- Provide forecasting based on historic trends and planned bank's initiatives.
- Provide assistance with batch scheduling issues and problems using the problem management process.
- Process job dependency information for batch job cycles as defined by the application support staff.
- Maintain specific batch cycles utilizing the standard operating system CRON scheduler throughout the operational support coverage hours as necessary to meet defined service levels.
- Provide appropriate system resources, tools and procedures to support the processing of user-initiated batch jobs.
- Agree with the bank's prioritization for scheduled, ad hoc and system jobs.
- Provide the necessary operational resources to support bank-submitted or bank-scheduled batch processing.
- Maintain tools and facilities for bank to perform batch scheduling and batch monitoring activities.
- Log problem records if scheduled and automated batch jobs fail.
- Consult with the bank should job priorities require a change due to system constraints.
- Perform problem diagnosis and purging of jobs on Operating System as necessary.
- Monitor automation tools and functionality.
- Maintain and execute system start- up/shutdown processes.
- Monitor, identify, and implement automation techniques to remove manual interventions for ongoing monitoring and operation activities.
- Perform maintenance and support for automation tools and products
- Problem determination and isolation for automated operational processes.
- Maintain and update documented hardware, facility, operating system, database and related system software recovery plans as necessary.
- Perform quarterly tests of the recovery plans to verify the effectiveness there-off in supporting the day-to-day banks operations.
- Provide the required personnel resources to perform recovery plan drills or actual recovery plan execution at the time of disaster.

- Provide requisite mirroring and redundancy across the DC & DR facilities to ensure adequate failover for the server environments.
- Cluster configuration including the integration of startup/shutdown scripts
- Configuration of shared storage
- Provision of documentation on implemented high availability solution
- Installation, maintenance and monitoring of clustering
- Conduct Cluster tests as a part of DR drills.

4.88 System Administration

- User account maintenance - Creating users, groups, creating user accounts, deleting user accounts, modifying user accounts etc. on the system.
- File/system/application access management in approval from Bank - Maintaining file and directory permissions on OS and application access management like creating user accounts at application level, assigning application access, setting application passwords, user lockout etc.
- Security monitoring and investigation - Assess risks on a particular system [OS environment and user needs], monitor network security, monitor denial of service attacks, bad bugs programmed threats, track logins, logouts, command runs.
- Performance optimization and reporting - Process and Memory Management, monitoring CPU performance, monitoring Memory performance, monitoring Input / Output performance, monitoring Ethernet traffic etc.
- Error detection, Troubleshooting and correction
- Bidder need to size the resources to maintain the system as per the SLA and scope of work mentioned in the RFP.

4.89 Updates/Upgrades/New releases/New versions/Patch Management

- The OEM may from time to time release Updates/ Upgrades/New releases/New versions and notify the Bank about the same. The Bidder agrees that all such Updates/Upgrades/ new releases/New versions, as and when released during the term of warranty or AMC will be implemented without any additional cost to the bank.
- Bidders have to note that Support for IPv6 is required as recommended by RBI Guidelines. This is applicable for the entire Solution proposed by the Bidder as part of the RFP. Also the Bidders should ensure that the Solution should be backward compatible to IPv4.

4.90 Data space management

The Bidder shall:

- Work with the Bank in defining data space management requirements of the Bank, which includes identifying:
 - Fragmented data on a disk, and

- Inefficiently utilized disk space
- Monitor disks at the Bank for fragmented data and periodically run a defragmentation process (that rewrites all the files on a disk, consolidating all the free space into large contiguous space), as appropriate;
- Periodically monitor disk space utilization at the Bank and take action to improve such utilization by (for example) deleting data that is no longer needed;
- Install, configure, test and manage any tools that may be required for data space management, such as those for compressing/stacking data or re-blocking data.
- Before taking any data management actions, notify the affected End Users at the Bank

4.91 **Database Administration**

The Bidder agrees that all Finacle & FEBA databases of the Bank will be administered as per applicable standards and requirements. The service covers all the databases run on Bank servers at DC, DR by the Bank including but not limited to:

4.92 **Operating system, Database and system software Installation**

- Installation and upgrade including patches of all OS, Databases and system software related to Finacle 10 and FEBA as per the recommendation of Application vendor during the contract period within quoted cost as per Bank's requirement.
- Defining the physical database design (log files, rollback segments, tablespaces, database descriptors, partitioned objects etc)
- Database Hardening and preparation & submission of hardening document as per the security policy of the Bank.

4.93 **Database Performance Management**

- Track & co-ordinate database related incidents/ problems till resolution.
- Conduct first level diagnosis for reported Incidents & perform resolution.
- Analysis of incident/ problem trends
- Co-ordination & escalation to Database's OEM till resolution
- Maintaining & monitoring the health & performance of databases (Primary and standby)
- Monitor & analyze alerts & logs including trace files, database changes, background job status, operating system logs, space management.
- Monitoring the table space utilization, file system usage and all other events of OS which may deter the performance of the database(primary as well as DR)
- Analyzing/Troubleshooting Database Performance
- Collection of statistics for databases
- Optimizing database performance, Performance tuning

- Monitor physical DBMS for performance & capacity requirements
- Monitoring of databases
- Monitoring of transaction logs
- Provide recommendations on DBMS design
- Monitor the backup & report on backup logs
- DDL, export & import related activities
- Preparing monthly database related reports
- Provide databases for MIS purpose on daily, monthly and on need basis
- Periodic optimization of application databases through compression facilities and database tuning.
- Provide reports on database currency and propose upgrade recommendations
- The bidder is required to install & implement database diagnostics & fine-tuning packs based on bank's requirements.

4.94 Database Capacity Management

- Estimate & recommend database requirements based on received data from Database Performance team and Business projections (Half-yearly/ As and when required)
- Perform Database Space analysis
- Alignment to purging policy
- Review archive logs requirements
- Customizations required at DB level

4.95 Database Monitoring and Administration

- Setting data storage parameters for storage associated with the physical elements of the database
- Handling password issues
- Configuration of Databases
- Creating a new database instance
- Testing & implementation of patches
- Testing & implementation of upgrades
- Managing, applying & verifying Database program patches
- Database Scripting
- Review, recommend and test patches.
- Coordinate all changes through the agreed upon change management process
- Start-up and shutdown of databases
- Daily activities such as end of day, end of month, end of year/quarter etc.
- Daily / Weekly / Monthly backup of databases
- Database recovery
- Weekly database recovery checks
- Required logs maintenance as per Standards of the Bank

- Disaster recovery as per Standards of the Bank
- Database problem resolution
- Recreation of Indexes
- Perform pre-batch activities-Scheduling of resources-Scheduling batch services- Define, maintain and document a work schedule for running production system batch jobs, and possible started tasks- Install and document system related batch jobs in the automated job scheduling package-Manage the root cause analysis for scheduling problems- Develop and maintain standards for job acceptance and implementation. The bidder can either use scripts or propose a tool for batch automation
- Remove applications from the application portfolio following decommissioning from projects or improvements.
- Perform regular import and loading of data and ad-hoc data extractions.
- Responsible for maintaining DB inventory
- Maintaining and performance tuning of UAT databases
- Migration of Databases (Release Upgrade)
- Execution of all back-end changes across all applications as informed by application owner
- Manage database transaction/ archive logs
- Administration/ management of archival databases (Purge from production and move to archive database)
- Resolving corruption (both Physical & Logical) issues at primary & standby databases
- Execute DBMS changes in support of major application or logical database design changes
- Designing &Implementation of logical & physical backups
- Flash back up on daily basis
- Bidder coordination with OEMs for upgrades, patches, bug fixes, performance tuning etc.
- Creation of a Standby database & setting up the DR
- Using data guard for Oracle
- Log shipping/Mirroring/Always On for database
- Monitoring, management and implementation of High Availability (HA) viz. clustering/RAC etc.
- Review of all databases and analysis on weekly basis
- Switchover of databases (as and when required and as per the defined time window)
- Refresh of Databases as per defined frequency or on demand
- Day end, month end, quarter end, year-end End of Day & Begin of Day support
- Resolution of audit points and VA/PT reports
- Support for processes run by branch charges for average quarterly balance/ SB interest calculation
- Apply application data fixes.

- Perform application non production environment data refreshes.
- Cloning of application data environments.
- Monitor capacity and performance of databases.
- Control of the database (adapting database profile parameters, expansion of tables and table spaces)
- Technical reorganization of the database (defragmentation) also after archiving
- Analysis of the DB tables & indexes - continual performance enhancement measures
- Create new indexes, performs reorganizations as required per analysis
- Creation, maintenance and execution of database related scripts such as start-up and shutdown processes
- Creating and maintaining formal documentation of the database environment (e.g. scripts, design, configuration, access rights)
- Monitor availability of the databases as a subset of monitoring overall service availability.
- Providing solution services for database design, configuration and maintenance
- Assist with incident and problem management related activities relating to the database environment (e.g. integration, interface, performance, configuration issues as part of the overall support service) including interaction with third party suppliers where necessary.
- Archive of application specific data as requested.
- Implementation and monitoring of database security.
- Loading software components- Kernel patches, Release changes.
- Proactively apply security fixes
- Documentation upkeep and records maintenance

4.96 **Database Backup restore**

- Manage Database backup/ restore schedule, administration (RMAN Backup)/Scheduled Backups and others
- Data Deletion & Purging/archival activity
- Purging of tables based on availability of space on a regular frequency (Frequency to be decided)
- Consolidating all database backups & Transaction log backups at a single file Server
- Perform database backup, restore and recovery routines.
- Compliance, review and updates to database standards documents.

4.97 **Access management**

- Implementing & managing security rules & access authority as per security policy of the Bank ; Database Hardening
- Implementation of database security by creating roles, privileges & profiles

- Management of users in database and assigning of roles/privileges
- Monitoring and management of logs for user access management of privileged users

4.98 **Database Recovery**

- Create & implement database recovery solutions in consultation with Bank's team
- Recovery of database at primary and standby as per case
- Restoration activities (from backup media)
- Database recovery using the physical & logical backups
- Support for DR Configuration
- Evaluating current backup, recovery, & data replication procedures & providing recommendations for improving those procedures

4.99 **Application Performance Tuning**

- Bidder needs to factor the Finacle and Internet Banking Application Performance tuning as per Bank's requirement.
- Bidder needs to do Finacle CBS and FEBA Performance tuning twice in a year in consultation with application OEM/OSD.
- During this activity bidder needs to study the full end to end application parameters, response time, configuration, landscape, all channels utilization, menu specific response time etc
- Bidder needs to complete the activity within 1 month and submit the report and bidder needs to implement the solutions within next 3 months from the date of submission of the report.

4.100 **Go Live Support**

- Bidder has to provision adequate number of L1 and L2 resources for the two months of the at time of Finacle 10.x rollout. Bank will notify bidder accordingly to deploy resources.
- Bidder has to ensure that these L1 and L2 staff are well versed with the bank's specific functionality / Interface and customizations for the smooth rollout Support.

4.101 **Enterprise Management System (EMS Tool)**

- Supply, Implementation & management of Monitoring & reporting of system for servers, storage, SAN switches, other hardware propose in this RFP and network devices & Links.
- Supply, Implementation & management Service desk manager for Change process management, call management and helpdesk support.
- Supply, Implementation & management of Patch Management solution for servers installed at Data Centres (DC, DR and NDR).

- Supply, Implementation & management asset management system for Data Centre Hardware.

4.102 **System & Security Audit**

- Before live implementation / migration of the software solution in production system, the product may be audited by Bank's appointed Software Audit firm / in house team.
- All audit points raised by the auditor should be complied by the bidder **in consultation with Bank's IT team** without any additional cost to the Bank within 60 days of its notification by the Bank.
- During warranty and AMC / ATS period, the bidder needs to comply with security and system audit observation without any additional cost to the Bank.

4.103 **Near DR(NDR) Setup**

- a. Bank is having near site at Bangalore and it maintain by M/s Sify. Near Site setup is a bunker site and there is no compute on that site only Storage data replication is enabled on Near Site. However, bidder needs to note that near site must be in sync with DC and there should not be any single point of failure. The same Storage base synchronous replication between DC to NDR has to be achieved to ensure zero data loss. Regarding this any additional license & hardware, Storage if required will be borne by bidder. Bidder needs to install & maintain NDR solution. Bank exiting hardware infrastructure at NDR site as mentioned below. If require bidder can use below mentioned devices for fresh NDR implementation on new storage.

Selected Bidder responsibility related to NDR:

- New NDR storage delivery, installation and implementation of storage base synchronous replication between DC to NDR by using Bank existing no. of 2 Gbps fiber link between DC to NDR. Bidder can also use existing devices (as mentioned below) for new NDR implementation. Bidder needs to sync DC storage LUN to NDR storage LUN for Archive, redo and control files of Core banking, FEBA+DEH, FAS, Mobile banking, UPI, RTGS, GBM and LAPS database.
- Monitoring of storage base replication with coordination with existing NDR FM Service provider 24x7x365.
- Warranty, ATM/ATS of new storage and additional hardware/software during implementation (if required)
- Databases recovery or service up of DR databases as a primary by using NDR Archive, redo and control file in case any exigency/deserter.
- Bidder needs to check integrity of archive files at NDR location on quarterly basic by applying archive files to DR database.
- Bidder can use SFTP for archive file transfer from NDR to DR through 2 no. of 180 Mbps point to point link.

Bank existing NDR FM service provider responsibility:

- Monitoring and maintenance of all Links related to NDR.
- Warranty, AMC/ATS for all existing devices/license/software

a) NDR setup details

| NDR | |
|--|-------------------------|
| Device Name | Model Number |
| SAN Switch -1 Mgmt | Brocade300 |
| SAN Switch -2 Mgmt | Brocade300 |
| FTP Server-1 (rx2800c i4 Itanium 9520) | rx2800c i4 Itanium 9520 |
| FTP Server-2(rx2800c i4 Itanium 9520) | rx2800c i4 Itanium 9520 |
| Router-1 | MSR 2003 24 Ac Router |
| Router-2 | MSR 2003 24 Ac Router |
| Network Switch-1 | Aruba 2930F 24G Switch |
| Network Switch-2 | Aruba 2930F 24G Switch |
| BNDRFTP3 | DL360 G10 |
| BNDRFTP4 | DL360 G10 |
| DR | |
| Device Name | Model Number |
| Router-1 | MSR 2003 24 Ac Router |
| Router-2 | MSR 2003 24 Ac Router |
| KNDREMS2 | ProLiant DL360 Gen9 |
| KNDREMS3 | ProLiant DL360 Gen9 |
| | |
| DC | |
| Device Name | Model Number |
| SAN Switch -1 Mgmt | Brocade300 |
| SAN Switch -2 Mgmt | Brocade300 |

| Link | |
|--------------|-------------------|
| Link Between | Bandwodth |
| DC-NDR | 2 Gbps form Sify |
| DC-NDR | 2 Gbps form TCL |
| NDR-DR | 180 Mbps M/s Sify |
| NDR-DR | 180 Mbps M/s TCL |

- b) The database in DC & Near DR Site will always be in synched. The transaction will be committed in Near DR storage at first, then on getting acknowledgement from Near DR storage, the transaction will get committed in DC storage. The entire process should be completed within 2 mili second or less time period.

- c) Synchronous replication should be enabled for CBS DB files to ensure the data consistency between the sites.
- d) The Recovery Point Objective (RPO) of the Solution should be zero at any point of time during the contract period. In case of failure of Primary site, last transaction data should be available in Near DR database. However, the replication of gap data (not available in DR Site) from Near DR to DR site should be completed within 30 minutes from failure of Primary site.
- e) During non-availability of Near DR site services by any means, the transaction will be happened in Primary Site DC without any manual intervention. Once the NDR site will be restored, the database of Primary site (DC) and NDR should be in Synchronous position within shortest possible of time. The time period, during which the NDR database is out of Sync, will be treated as downtime of the NDR solution.
- f) In case, due to network link fluctuation or by any other means the NDR site is getting very frequently out of synch state, the vendor should ensure the transaction will be happened at least in Primary Site DC and core banking transactions should not be hampered. The entire time period during which the NDR database will be out of Sync, will be treated as downtime of the NDR solution.
- g) The bidder shall provide contacts and escalation matrix to log the complaints / problems faced in the facility provided to the Bank. The bidder shall provide for periodic monthly reports to the Bank on the performance of the solution, synchronous data replication report, incidents/ problems reported and corrective action taken on the same.
- h) The bidder shall co-ordinate, support to Bank's vendors, who are maintaining Bank's Hardware, OS, DB, Network, Security, DC hosting for implementation & maintenance of Near DR solution
- i) Bidder shall monitor the link and provide the facility to the Bank to monitor the links in real time from DC & DR Sites. Following parameters of Network link shall be monitored
 - i. Link Latency.
 - ii. Bandwidth utilization.
 - iii. Packet loss.

4.104 The successful bidder should provide support for all the supplied devices on 24 X 7 X 365 basis and should replace the equipment within 4 hours of time, in case of any failure.

4.105 Bidder has to take care of all the integration cost for all the application / Hardware/ software / ecosystem proposed in this RFP with all the interfaces of the bank including application & Database. Bank will not pay any extra cost for any integration with any of the bank application which is not part of this RFP. Maximum no. of Integration of application/interface will be 50.

4.106 **Solution Design**

The Bank requires the solution architecture to have the following minimum capabilities/ features:

End to end IT Architecture

- The Solution should have a compatible end to end IT architecture covering
- End to end solution architecture
- End to end integration architecture
- End to end implementation architecture

4.107 24 X 7 X 365 Availability

24 X 7 X 365 Availability The Critical Business Solutions as defined in SLA and other proposed solutions' design and deployment architecture should be such that the system is available to users 24 X 7 throughout the year without any down-time even during EOD, BOD, OLTP, daily, monthly, quarterly , annual closings, DR-Drill , system maintenance, backups, report generation, MIS generation, and running of batch processes. The Minimum technical requirement in revised Annexure D. For 24 X 7 X 365 availability, to maintained SLA & uptime, if additional hardware/software/solution required bidder needs to factor same without any addition cost to Bank.

4.108 Bidder should supply racks for hosting proposed hardware. Bidder should design, deploy & install the proposed hardware with optimized utilization of RACK space and power consumption without compromising high availability factor of hardware/application/database. Bidder should submit deployment designed for proposed hardware along with Rack Space & power requirement with technical bis.

4.109 Minimum Resource Deployment during contract period

| Resource | Location of the resource | Minimum Shift (8 hours) | Minimum no. of Resources Per Shift | Service Window |
|---|---------------------------------|--------------------------------|---|-------------------------------|
| Program Manager (Infrastructure & Applications Management) | DR | 1 | 1 | General Shift |
| L1- Application Management & Helpdesk (CBS) | DR | 2 | 10 | 7 AM to 3 PM 3 PM to 11 PM |
| L2- Application Management (CBS) | DR | 3 | 3 | 24x7x365 |
| L2- Application Management (Internet Banking) | DR | 3 | 1 | 24x7x365 |
| L1- Hardware , OS and backup & restoration Management & Load Balancer (DC Site) | DC | 3 | 2 | 7 AM to 3 PM 3 PM to 11 PM |
| | | | 1 | 11 PM to 7 AM |

| | | | | |
|---|----|---|---|-------------------------------|
| L1-Hardware, OS and backup & restoration Management & Load Balancer (DR Site) | DR | 3 | 2 | 7 AM to 3 PM 3 PM to 11 PM |
| | | | 1 | 11 PM to 7 AM |
| L2-Hardware, OS and backup & restoration Management & Load Balancer (DR Site) | DR | 2 | 1 | 7 AM to 3 PM 3 PM to 11 PM |
| L1 – Database Management (DR Site) | DR | 3 | 1 | 24x7x365 |
| L1 – Database Management (DC Site) | DC | 3 | 1 | 24x7x365 |
| L2 - Database Management (DC) | DC | 1 | 1 | 11 PM to 7 AM |
| L2 - Database Management (DR) | DR | 2 | 1 | 7 AM to 3 PM 3 PM to 11 PM |
| EMS tool Management, Monitoring System and reporting | DR | 1 | 1 | 7 AM to 3 PM 3 PM to 11 PM |
| NDR Monitoring | DR | 3 | 1 | 24x7x365 |
| L2-Middleware | DR | 2 | 1 | 7 AM to 3 PM 3 PM to 11 PM |

However, if needed, bidder can engage more resources to meet SLA, uptime and scope of work defined in this RFP during contract period.

4.110 **Resource Qualification & Experience**

| Role / Description | Experience | Educational Qualifications/ Certifications/Skills |
|---|------------|---|
| Program Manager for Infrastructure and Application | >10 years | 1) MBA/Engineering/MCA 2) Should have experience as Program Manager of managing IT Infrastructure managed services (servers, storage, database, networks, backup & restore, application) Implementation and operations engagements in at least one Scheduled Commercial Banks in India having more than 1000 branches in India in last 3 years |
| L1-Hardware, OS and backup & restoration Management & Load Balancer | >2 years | <ul style="list-style-type: none"> ▪ Diploma/Engineering Graduate/Science Graduate/MCA/BCA. ▪ Good Communication (written/Oral) ▪ Knowledge/expertise on Infrastructure Management - Windows/Solaris/HP Unix / AI/ Linux administration ▪ Technical certifications like MCP/SA/ |

| | | |
|--|----------|--|
| | | <p>RHCE etc.</p> <ul style="list-style-type: none"> ▪ Specific experience with Storage (e.g. SAN, NAS) and Backup (e.g. Network, Tape libraries) technologies ▪ Have experience on File base cluster system, Middleware like JBOOS, Redhat , WebLogic, WebSphere ▪ Have Experience on Managing Database RAC Architecture ▪ Willing to work in 24X7 environment Should have worked in 1 similar project as L1 |
| L2-Hardware, OS, Data Base and backup & restoration Management & Load Balancer | >5 years | <ul style="list-style-type: none"> ▪ Diploma/Engineering Graduate/Science Graduate/MCA/BCA ▪ Good Communication (written/Oral) ▪ Knowledge/expertise on Infrastructure Management - Windows/Solaris administration / HP UNIX / AIX/Linux ▪ Technical certifications like MCP, SA, RHCE etc. ▪ Specific experience with Storage (e.g. SAN, NAS) and Backup (e.g. Network, Tape libraries) technologies ▪ Have experience on File base cluster system , Middleware like JBOOS, Redhat , WebLogic, WebSphere ▪ Have experience on Load Balancer. Willing to work in 24X7 environment Should have worked in 1 Similar Projects as L2. |
| L1- Application Management & helpdesk | >2 years | <ul style="list-style-type: none"> ▪ Any Graduate ▪ Good Communication (written/Oral) ▪ Knowledge of Finacle Menu Options, Business Logic of Banks, Handling Calls, Managing EOD / BOD operations of Bank ▪ Willing to work in 24X7 environment Should have worked in 1 Similar Projects as Finacle Application L1. |
| L2- Application Management (CBS & Internet Banking) | >5 years | <ul style="list-style-type: none"> ▪ Diploma /Engineering Graduate /Science Graduate/MCA/BCA. ▪ Good Communication (written/Oral) ▪ Experience of Finacle version 10x Customization, Implementation, Configuration. ▪ Knowledge of Internet Banking Implementation, Configuration. ▪ Knowledge of Banking Operation Logic, RTGS , NEFT, Trade Finance, EOD BOD,GBM,UPI,IMPS etc. ▪ Willing to work in 24X7 environment Should have worked in 1 Similar Projects as Finacle Application L2. |
| L1- Data Base Management (CBS & Internet Banking) | >2 years | <ul style="list-style-type: none"> ▪ Diploma/Engineering Graduate/Science Graduate/MCA/BCA. ▪ Good Communication (written/Oral) ▪ Working Knowledge Oracle database, SQL |

| | | |
|---|----------|--|
| | | Database in core banking environment. ▪ Knowledge on Managing Database RAC Architecture |
| L2- Data Base Management (CBS & Internet Banking) | >5 years | ▪ Diploma/Engineering Graduate/Science Graduate/MCA/BCA. ▪ Good Communication (written/Oral) ▪ Knowledge on Managing Database RAC Architecture ▪ Working Knowledge Oracle database, SQL Database in core banking environment. |
| Near DR FM service | >2 years | ▪ Diploma/Engineering Graduate/Science Graduate/MCA/BCA. ▪ Good Communication (written/Oral) ▪ Knowledge on Managing NDR solution. |

Part-V

1. Order details

The purchase order will be placed by Bank Head Office, DIT in the name of selected bidder as per requirement mentioned below table, the sequence of placing the purchase order will be at bank's discretion. The payment will be made by Head Office, DIT and the Performance Bank Guarantee for order will be required to be submitted in the same office.

| Sl. no. | Purchase order | Items Covered | Reference Commercial BOM (Annexure E) | Delivery & Installation time |
|----------------|--|--|---|---|
| 1 | 1 st Purchase order / Master Purchase order | All hardware related to Finacle 10.x & NDR & EMS and its implementation & AMC L1 & L2 support for database, hardware, middleware management and NDR FM. | Table A, C, E and F | 16 Weeks |
| 2 | 2 nd Purchase order | All software related to Finacle 10.x & NDR and ATS Enterprise management tool solution (Software) and ATS | Table B and D | 4 Weeks |
| 3 | 3 rd Purchase order | L1 helpdesk support or application Finacle 10.x (Domestic and overseas) L2 support for application Finacle 10.x (Domestic and overseas) | Table G | 8 Weeks |
| 4 | 4 th Purchase order | All Hardware & software related to FEBA and Its Implementation, ATC/AMC L2 support for FEBA | Table A, B, C, D, E and G (FEBA+DEH+FAS related hardware, Software) | 16 Weeks |
| 5 | 5 th Purchase order | Customization man-days (on requirement basis) | Table I | 8 Weeks |

| | | | | |
|---|--------------------------------|---|-------------------|---------|
| 6 | 6 th Purchase order | Phase 1 upgradation of Database server & Storage (on requirement basis) | Table H (Phase 1) | 8 Weeks |
| 7 | 7 th Purchase order | Phase 2 upgradation of Database server, Storage and backup license (on requirement basis) | Table H (Phase 2) | 8 Weeks |

Bank reserves the right to conduct the pre-shipment inspection or onsite inspection of the system before final acceptance by Bank. In case of pre-shipment inspection, additional one week will be given to bidder for delivery.

2. Delivery and Installation

The Bank reserves the right to shift the ordered items to any location where bank has presences (DC, DR and NDR site), anywhere in India, during the warranty period.

The selected bidder must undertake to GO LIVE (delivery, installation, configuration, migration for Hardware and including EMS solution hardware) as per SOW in the RFP as per above table (clause no.1 Part V)

However, any delay of the GO Live due to site not readiness in the Bank will not attributable to the selected bidder for LD purpose.

3. Warranty, Annual Maintenance Support (AMC) Annual Technical Support (ATS)

- 3.1 The Selected Bidder must provide 3 (Three) year on-site comprehensive warranty for all hardware and peripheral items to be supplied under this RFP covering all parts and Label from the date of acceptance of the systems by UCO Bank at the respective locations i.e. on-site comprehensive warranty and two year AMC (4th Year AMC & 5th Year AMC).
- 3.2 The Selected Bidder must provide 1 (One) year on-site warranty for all software items to be supplied under this RFP from the date of acceptance of the systems by UCO Bank at the respective locations i.e. on-site comprehensive warranty and four year ATS (2nd Year , 3rd Year , 4th Year AMC & 5th Year AMC).
- 3.3 During the warranty/ATS/AMC period, the bidder will have to undertake comprehensive maintenance of the entire hardware, hardware components, system software and accessories supplied by the bidder. OS patch application

as required by bank from time to time will be the responsibility of the bidder during the warranty and AMC period

3.4 The bidder shall be fully responsible for the manufacturer's warranty for all equipment, accessories, spare parts etc. against any defect arising from design, material, manufacturing workmanship, or any act or omission of the manufacturer / bidder or any defect that may develop under normal use of supplied equipment during the warranty period.

3.5 Warranty shall not become void even if UCO Bank buys any other supplemental hardware from a third party installs it with these machines. However, the warranty will not be applied to such hardware installed. Besides the above, the bidder will have to enter into Service Level Agreement (SLA) with the Bank.

4. Contract Period:

The selected bidder needs to execute a Service Level Agreement (SLA) with UCO Bank covering all terms and conditions of this RFP. SLA will cover performance and availability of the solution deployed. The contract period will be for a period of five years from the date of Agreement. Contract period may be extended further for maximum 2 years on mutually agreed terms and condition at that point of time. The performance of the selected bidder shall be reviewed every quarter. Any offer falling short of the contract validity period is liable for rejection.

5. Payment Terms:

Hardware Costs (DC, DR and NDR) for all hardware as part of the Solution

5.1.1 50% of the delivered hardware cost would be payable on successful delivery and verification of BoM supplied at DC, DR and NDR respectively. Payment will be released after delivery on submission of proof of delivery and the acceptance certificate duly signed by Bank's authorized official, after realizing penalty charges for late delivery & installation, if any.

5.1.2 50% for Finacle 10.x related hardware (Server, Storage, SAN, NAS, Load Balancer, Tape Library, Disk based backup) of the delivered hardware cost would be payable on successful installation, commissioning, acceptance on successful benchmarking test and sign off by the Bank of the hardware at DC, DR and NDR respectively or payment can be released against submission of BG of equivalent amount valid for 18 months to achieve the stated objective or Finacle 10.x Go live date whichever is earlier and accordingly BG will be released.

5.1.3 50% payment for UAT, Training, migration/SIT/development server, EMS hardware and FEBA related hardware (Servers & Load balancers) cost would be payable on successful installation, commissioning, acceptance on successful test application and sign off, after realizing penalty charges for late delivery & installation.

5.2 Application/Solution/system software Cost

5.2.1 50% of the cost, of such Application/Solution/system software, will be payable on successful delivery of said items. Payment will be released after delivery on submission of proof of delivery and the acceptance certificate duly signed by Bank's authorized official after realizing penalty charges for late delivery, if any.

5.2.2 20% of the cost, of application/Solution/system software, will be payable on acceptance and sign-off by the Bank after realizing penalty charges for late delivery, if any.

5.2.3 30% of the cost, of such software, will be payable after 3 months of successful running, after realizing penalty charges for late delivery, if any

5.3 Implementation Cost

100% of the cost, will be payable on successful implementation with all the functionalities of the said software and hardware and acceptance sign-off from the Bank realizing penalty charges, if any.

5.4 Facility Management Cost and AMC/ATS cost

5.4.1 The fees for Facility Management Resources would be payable monthly in arrears, at the end of the month , on actuals, as per the bill submitted by the Bidder and on verification of the Bank after realizing penalty charges, if any.

5.4.2 AMC for Hardware shall be paid in quarterly arrear basis, after realizing penalty charges, if any.

ATS for Software shall be paid yearly in advance, after realizing penalty charges, if any.

However, in case of order cancellation or termination, Bank should get direct support from OEM/OSD or through Bank appointed third party vendor (MAF, Annexure C).

5.4.3 Also, the payments for that quarter will be made only after the acceptance of the milestones and relevant activities/deliverables for that quarter. Any delay in achievement of the milestones or deliverables will result in further delay of the payment.

5.5 Payment against Customization Man-days and Upgradation

100% of the cost, will be payable on successful implementation with all the functionalities of the customization/ hardware and acceptance sign-off from the Bank realizing penalty charges, if any.

6. Paying Authority

The payments as per the Payment Schedule covered hereinabove shall be paid by DIT, Head Office. However, Payment of the Bills would be released, on receipt of advice / confirmation for satisfactory delivery and commissioning, live running and service report etc. Also the bidder has to submit the certificate of insurance covering all the risks during transit, storage, installation, commissioning, testing and handling including third party liabilities

Following Documents are to be submitted for Payment:

- Invoice in Triplicate
- Duly receipted Delivery Challans
- Original Octroi Receipts, if any
- Installation Report, counter signed by an authorized official from the delivery site.

7. Performance Bank Guarantee

The Selected bidder, within 15 days from the date of letter of intent (LOI) will have to furnish a Performance Bank Guarantee, format as per Annexure – G, issued by any scheduled commercial bank (other than UCO Bank) equivalent to 10% of the project cost valid for 63 months (60 months + a claim period of 3 months) from the date of Letter Of Intent (LOI). However, the selected bidder may have to extend the validity of the Performance Bank Guarantee for a period of AMC/ATS as required by the Bank. Upon furnishing the Performance Bank Guarantee, the EMD of the selected bidder shall be returned.

The Performance Bank Guarantee shall act as a security deposit and either in case the selected bidder is unable to start the project within the stipulated time or start of the project is delayed inordinately beyond the acceptable levels, the Bank reserves the right to forfeit the same.

Further, the Bank reserves the right to invoke the Performance Bank Guarantee in case the selected bidder is not able to fulfill any and all conditions specified in the document or is unable to complete the project within the stipulated time and such breach remains uncured within such period as mentioned in the termination clauses. This is independent of the LD (Liquidity Damage) on Delivery and installation.

In case the contract is getting extended, the selected bidder shall submit the Bank Guarantee of 10% of the project cost of that period of time with a validity of the extension period with 3 months claim period.

The selected bidder shall be responsible for extending the validity date and claim period of Performance Bank Guarantee as and when it is due on the account of non-completion of the project and warranty period.

8. Service Level Agreement

The selected bidder will be required to sign the Service Level Agreement with the Bank within 15 days of the acceptance of the LOI.

The draft format of SLAs will be provided after acceptance of the Letter of Intent (LOI) by the successful bidder.

This section includes the SLAs which Bank requires the Successful Bidder to manage as key performance indicators for the scope of work. The objective of the SLA is to clearly define the levels of services to be delivered by the Successful Bidder to Bank for the duration of the contract.

The following section reflects the measurements to be used to track and report performance on a regular basis.

Bank intends to select the Successful Bidder who shall have common vision to deliver high quality of services to the users.

Definition of terms used in this section is as follows:

“Downtime” shall mean the time period for which the specified services / components with specified technical and service standards are not available to Bank and excludes the scheduled outages planned in advance and the bandwidth link failures within SLA limits agreed with network service providers.

“Incident” refers to any event / abnormalities in the functioning of the equipment / specified services that may lead to deterioration, disruption in normal operations of Banks' services.

“Resolution Time” shall mean the time taken in resolving (diagnosing, trouble shooting and fixing) an incident after it has been reported to the selected bidder through email/phone/SMS/other electronic form . The resolution time shall vary based on the category of the incident reported at the service desk.

"Scheduled operation time" means the scheduled operating hours of the System for the month. All planned downtime on the system would be deducted from the total operation time for the month to give the scheduled operation time.

"System downtime" subject to the SLA, means accumulated time during which the System is not available to the Bank's users or customers due to in-scope system or infrastructure failure, and measured from the time the Bank and/or its customers log a call with the Bidder of the failure or the failure is known to the Bidder from the availability measurement tools to the time when the System is returned to proper operation. Any denial of service to the Bank users and Bank customers would also account as "System downtime"

The business hours are 24X7 on any calendar day.

Critical and Key infrastructure of Data Centre, Disaster Recovery Centre and Near DR Site will be supported on 24x7 basis.

If any one or more of the components defined in "Critical" at the Data Centre, Disaster Recovery Facility and Near DR Site are down resulting in non-availability of Solution, then all the services listed in the "Critical" availability measurements table shall be considered for calculating the system downtime.

Typical Resolution time will be applicable if systems are not available to the Bank's users and customers and there is a denial of service.

Following are the requirements related to managing the service levels to be maintained in providing such services:

Service Level Agreement and Targets

This section includes the SLAs which Bank requires the Successful Bidder to manage as key performance indicators for the scope of work. The objective of the SLA is to clearly define the levels of services to be delivered by the Successful Bidder to Bank for the duration of the contract.

The following section reflects the measurements to be used to track and report performance on a regular basis. The targets shown in the following sections are for the period of contractor its revision whichever is earlier

Service Level Measurement

- Bank shall evaluate the performance of the Successful Bidder on these SLAs compliance as per the periodicity defined.
- The Successful Bidder shall provide, as part of monthly evaluation process, reports to verify the Successful Bidder's performance and compliance with the SLAs.
- Automated data capturing and reporting mechanism will be used for SLA reporting. The bidder has to leverage proposed EMS tools to monitor and manage the Solution / IT Infrastructure.
- If the level of performance of Successful Bidder for a particular metric fails to meet the minimum service level for that metric, it will be considered as a Service Level Default.
- The Bidder shall provide SLA Report on monthly basis and a review shall be conducted based on this report. A monthly report shall be provided to the Bank at the end of every month containing the summary of all incidents reported and associated Bidder performance measurement for that period. Performance measurements would be accessed through audits or reports, as appropriate to be provided by the Bidder.

Uptime & Penalty

Uptime (Monthly)

| Sl. No. | Category | Required uptime |
|---------|---|-----------------|
| 1. | Production Hardware- Storage (DC, DR and NDR) and NAS (DC & DR) | 99.95% |
| 2 | Production Hardware - Server, Load Balancer, SAN director/switch, Backup solution, Disk base Backup (DC & DR) | 99.90% |
| 3 | UAT/Migration/Development environment | 99.50% |
| 4. | Application & Delivery Channels | 99.95% |
| 5. | Database (Production) | 99.95% |
| 6. | EMS Tools | 99.50% |

Note:

- Response time for replacement/ rectification for Storage and NAS is 6 hours.
- Response time for replacement/ rectification for all other production related hardware is 8 hours.
- Response time for replacement/ rectification for UAT related hardware is 24 hours

If bidder fails to rectify/replace faulty hardware within stipulated time mentioned above, then bidder will be penalized by 0.5%/per hours or part thereof of faulty hardware cost (maximum 10%) and same will be deducted from monthly FM changes. This penalty will be independent of other penalties

Uptime Rules

- Wherever System Integrator monitors onsite, the downtime calculation starts from the time of hardware/ software failure leading to denial of service.
- Wherever, Bank monitors, the downtime calculation starts from the time of reporting by the Bank.
- The preventive or scheduled maintenance done without affecting the functioning of branches and delivery channels is not considered as downtime.

Level Classification

| Level | Type of Infrastructure | Function/ Technology |
|--------------------|---|--|
| I. Critical | Criteria | a. No user can access the Business infrastructure system or; any problem due to more than 10 branches cannot access the Business systems, any sub module of any application or a complete branch cannot access the Business Systems. b. Failure of any of the middleware/interface component due to which the solution is not functioning. c. Interruption making any functionality inaccessible services availability or unavailability or a severe impact on of any reports which is urgently required for Compliance purpose and d. there is no possible alternative |
| | Business Infrastructure/Solution | Critical Business infrastructure related to providing systems to the Bank users and customers comprising of but not limited to the following: IT Infrastructure at DC, DR and Near Site Servers, Storage and Support applications / functions at DC, DR and NDR such as: Critical Business Solutions <ol style="list-style-type: none"> Core Banking System (Production, Report and MIS) and its all related Hardware Internet Banking (FEBA with DEH & FAS) SMS alerts Middleware Load Balancer Finacle Integrator Delivery Channels Online Interface Application Servers (C24, Uniser and Finacle Integrator) NDR All the above stated applications and related infrastructure are considered as critical |
| II. Non - Critical | Criteria | a. Any problem due to which less than 5 branches cannot access the Business systems, any sub module of any application or a complete branch cannot access the Business Systems or; b. Any incident which is classified as "Critical" for which an acceptable (by Bank) workaround has been provided |
| | Business Infrastructure | a) EMS tools. b) UAT Environment |
| III. | Criteria | a. All other residuary business infrastructure not defined in |

| | | |
|--------------------|--------------------------------|---|
| Significant | | <p>"Critical" and "Non Critical" or;</p> <p>b. Any incident which is classified as "Non Critical" for which an acceptable (by Bank) workaround has been provided or;</p> <p>c. Any problem due to which 1 to 9 users cannot access the Business infrastructure system or;</p> |
| | Business Infrastructure | a. Any other infrastructure not covered in "critical" and "non- critical" |

Note: The resolution time is not considered as uptime. The penalties during the maximum resolution time will be as applicable in the table below.

SLA for Business Continuity and Uptime

| Sl. No | Services | Infrastructure Output | Description | Calculation | Periodicity | MSLA | Penalty | Measurement Tool |
|--------|--|--|--|---|-------------|---|---|--|
| 1 | Business Infrastructure & Systems & application including middleware | Availability of Business Infrastructure Elements & Systems | <p>Availability of Business Infrastructure Elements & Systems & application is the time that each solution is available for intended use without any malfunctions. It is measured in minutes and calculated by (a) System Scheduled Uptime minus Scheduled Downtime minus Unscheduled Downtime, divided by (b) System Scheduled Uptime minus Scheduled Downtime with the result expressed as a percentage to two decimal places.</p> | <p>Availability = $(U - C - D) / (U - C)$</p> <p>Refer to the below definitions of the parameters.</p> <ul style="list-style-type: none"> System Scheduled Uptime for servers/service (U) Scheduled Downtime for servers/service (C) Unscheduled Downtime for servers/service (D) | Monthly | <p>For critical Solution- 99.95% (for DB, Application, Delivery Channel, Storage & NAS) and 99.90% (for Production Hardware - Server, Load Balancer, SAN, Backup solution, Disk base Backup)</p> <p>For Non-Critical Solutions- 99.5%</p> <p>For significant Solutions- 99%</p> | <ul style="list-style-type: none"> For each 0.01% drop in availability, penalty 0.5% of 3 months FM cost For each 0.01% drop in availability, penalty 0.25% of 3 months FM cost For each 0.01% Drop in | EMS Tool/Issue reported time and issue resolved time |

| | | | | | | | | |
|----------|--|------------------------------|--|--|---------|--|--|--|
| | | | | | | | availability, penalty 0.15% of 3 months FM cost | |
| 2 | | Database Management Services | <p>Availability of the database—</p> <p>Database availability is the time that each instance of database is available for intended use without any malfunctions, It is measured in minutes and calculated by (a) System Scheduled Uptime minus Scheduled Downtime minus Unscheduled Downtime, divided by (b) System Scheduled Uptime minus Scheduled Downtime with the result expressed as a percentage to two decimal places.</p> | <p>Availability = $(U - C - D) / (U - C)$</p> <p>System Scheduled Uptime database (U)</p> <p>Scheduled Downtime for database (C)</p> <p>Unscheduled Downtime for database (D)</p> | Monthly | <p>For critical database- 99.95%</p> <p>For non-critical databases- 99.90%</p> <p>For significant database s- 99 %</p> | <p>•For each 0.01% drop in availability, penalty 0.5% of 3 months FM cost</p> <p>•For each 0.01% drop in availability, penalty 0.25% of 3 months FM cost</p> <p>•For each 0.01% Drop in availability, penalty 0.15% of 3 months FM cost</p> | EMS Tool/Issue reported time and issue resolved time |
| 3 | | Performance Measurement | <p>Hardware Utilization----</p> <p>Reporting to the Bank if Hardware daily peak utilization levels of CPU, RAM, NIC and hard disk etc. exceeds 60% at any given point of time during</p> | <p>Reported alerts to the bank/Total no of alerts for breach of hardware utilization</p> | Monthly | 99% | For each 0.5 % drop in service level, penalty shall be 1% of 3 months FM cost | |

| | | | | | | | | |
|--|--|--|---|--|--|--|--|--|
| | | | business hours or production storage IOPS/Memory utilization levels exceeds 60% at any given point of time | | | | | |
|--|--|--|---|--|--|--|--|--|

Total penalty imposed by the Bank under this contract shall not exceed 10% of the order value (TCO).

9. Liquidated Damage

Notwithstanding Bank's right to cancel the order, liquidated damages at 1% (One percent) of the price of undelivered portion/ not installed hardware/services will be charged for every week's delay in the specified delivery/installation of services/hardware schedule subject to a maximum of 10% of the total cost of ownership.

Bank will have right to recover these amounts by any mode such as adjusting from any payments to be made to the Bidder or from the performance Bank Guarantee. Liquidated damages will be calculated per week basis. Dispatch details shall be shared by the bidder regularly after handing over the consignment to the concerned Courier Agency/Indian Postal services.

The Bank reserves its right to recover these amounts by any mode including adjusting from any payments to be made by the Bank to the Bidder. Bank may invoke the Bank Guarantee for further delay in in delivery & migration.

10. Price Validity

The selected bidder will be required to keep the price valid for a period of 01 year (12 months) from the date of issuance of 1st Purchase Order. There shall be no increase in price for any reason whatsoever during the period of 12 months and Bank may place the additional Purchase Orders to the selected bidder for any or all of the services at the agreed unit rate for line items as mentioned in the commercial format i.e. Annexure – E during the price validity period of 12 months.

11. Adoption of Integrity Pact

UCO Bank has adopted practice of Integrity Pact (IP) as per CVC guidelines. The Integrity Pact essentially envisages an agreement between the prospective vendors / bidders / sellers, who commit themselves to Integrity Pact (IP) with the Bank, would be

considered competent to participate in the bidding process. In other words, entering into this pact would be the preliminary qualification. In case of bids for the purchase of Goods, Services, and Consultancy etc. not accompanied with signed IP by the bidders along with the technical bid, the offers shall be summarily rejected. The essential ingredients of the Pact include:

- a. Promise on the part of the principal not to seek or accept any benefit, which is not legally available.
- b. Principal to treat all bidders with equity and reason
- c. Promise on the part of bidders not to offer any benefit to the employees of the Principal not available legally
- d. Bidders not to enter into any undisclosed agreement or understanding with other bidders with respect to prices, specifications, certifications, subsidiary contract etc.
- e. Bidders not to pass any information provided by the Principal as part of business relationship to others and not to commit any offence under PC/IPC Act.
- f. Foreign bidders to disclose the name and address of agents and representatives in India and Indian Bidders to disclose their foreign principals or associates.
- g. Bidders to disclose any transgressions with any other company that may impinge on the anti-corruption principle.

Integrity Pact, in respect of a particular contract, shall be operative from the date IP is signed by both the parties till the final completion of the contract. Any violation of the same would entail disqualification of the bidders and exclusion from future business dealings. IP shall cover all phases of contract i.e. from the stage of Notice Inviting Tenders (NIT)/Request for Proposals (RFP) till the conclusion of the contract i.e. final payment or the duration of warranty/guarantee. Format of IP is attached as Annexure – XIII for strict compliance.

The following Independent External Monitors (IEMs) have been appointed by UCO Bank, who will review independently and objectively, whether and to what extent parties have complied with their obligation under the pact.

- a) Shri S R Raman
1A-121, Kalpataru Gardens
Near East-West Flyover
Kandivali East, Mumbai - 400101
E-mail:- raman1952@gmail.com
- b) Ms Vijayalakshmi R Iyer
Flat No. – 1402, Barberry Towers,
Nahar Amrit Shakti,
Chandivali, Powai, Mumbai – 400072
E-mail:- vriyer1955@gmail.com

All pages of Integrity Pact (IP) must be signed and stamped .Integrity Pact (IP) should be deposited with IT Department undertaken procurement at the address mentioned along with RFP document.

12. Preliminary Scrutiny

UCO Bank will scrutinize the offers to determine whether they are complete, whether any errors have been made in the offer, whether required technical documentation has been furnished, whether the documents have been properly signed, and whether all the necessary information supported by documentary evidences are submitted as per prescribed method. Offers not meeting the prescribed guidelines and or with incorrect information or not supported by documentary evidence, wherever called for, would summarily be rejected. However, UCO Bank, at its sole discretion, may waive any minor non-conformity or any minor irregularity in an offer. UCO Bank reserves the right for such waivers and this shall be binding on all vendors.

13. Single Point of Contact

The selected bidder shall appoint a single point of contact, with whom Bank will deal, for any activity pertaining to the requirements of this RFP.

14. TAXES

- a. Bidder shall be solely liable for the payment of all taxes, duties, fines, penalties, etc., by whatever name called as may become due and payable under the local, state and/or central laws, rules and/or regulations as may be prevalent and as amended from time to time in relation to the services rendered pursuant to this agreement. The Bank may in its discretion, but without being bound to do so, make payment of Taxes, duties as aforesaid and in the event of such payment, Bank shall be entitled to deduct the payment so made from the payment due to Bidder in respect of Bills.
- b. The Bank shall not be liable nor responsible for collection and / or payment of any such taxes, duties, fines, penalties etc., by whatever name called, that are due and payable by bidder, under the local, state and/ or central laws, rules and /or regulations as may be prevalent and as amended from time to time.
- c. Nothing contained herein shall prevent the Bank from deducting taxes deductible at source as required by any law/s or regulation/s. Bidder shall be responsible to report any non-receipt of certificate of taxes deducted at source within ninety (90) days of deduction of such taxes at source by the Bank to bidder. The Bank will not

issue any duplicate certificate for deduction of taxes at source unless such request is made within ninety (90) days of the closure of the financial year.

- d. Bidder shall co-operate fully in the defense of any claim/s by any local, state or union authorities against The Bank with respect to any taxes and/or duties due and payable by bidder and /or individuals assigned by bidder under this agreement. Without limiting the generality of the foregoing bidder shall upon request by The Bank, give to The Bank all documents, evidences in a form satisfactory to The Bank to defend such claim/s. Any claims filed against The Bank, the cost to be borne by the selected bidder.
- e. The payments which is/are inclusive of GST and other taxes, fees etc. as per the Payment Schedule covered herein above shall be paid by Department of Information Technology, UCO Bank, Head Office – Kolkata. However, Payment of the Bills would be released, on receipt of advice / confirmation for satisfactory delivery and commissioning, live running and service report etc. after deducting all penalties.

15. Confidentiality and Secrecy

The RFP document is confidential and is not to be reproduced, transmitted, or made available by the Recipient to any other party. The RFP document is provided to the Recipient on the basis of the undertaking of confidentiality given by the Recipient to Bank. Bank may update or revise the RFP document or any part of it. The Recipient acknowledges that any such revised or amended document is received subject to the same terms and conditions as this original and subject to the same confidentiality undertaking.

The Recipient will not disclose or discuss the contents of the RFP document with any officer, employee, consultant, director, agent, or other person associated or affiliated in any way with Bank or any of its customers, suppliers, or agents without the prior written consent of Bank.

The bidder/selected bidder must undertake that they shall hold in trust any Information received by them under the Contract/Service Level Agreement, and the strictest of confidence shall be maintained in respect of such Information. The bidder has also to agree:

- To maintain and use the Information only for the purposes of the Contract/Agreement and only as permitted by BANK;

- To only make copies as specifically authorized by the prior written consent of Bank and with the same confidential or proprietary notices as may be printed or displayed on the original;
- To restrict access and disclosure of Information to such of their employees, agents, strictly on a "need to know" basis, to maintain confidentiality of the Information disclosed to them in accordance with this Clause, and
- To treat all Information as Confidential Information.
- The selected service provider acknowledges and agrees that all tangible and intangible information obtained, developed or disclosed including all documents, data, papers, statements, any business/customer information, trade secrets and process of the UCO Bank relating to its business practices in connection with the performance of services under this Agreement or otherwise, is deemed by the UCO Bank and shall be considered to be confidential and proprietary information ("Confidential Information"), solely of the UCO Bank and shall not be used/disclosed to anybody in any manner except with the written consent of The UCO Bank.
- The selected service provider shall ensure that the same is not used or permitted to be used in any manner incompatible or inconsistent with that authorized by the UCO Bank. The Confidential Information will be safeguarded and the selected service provider will take all necessary action to protect it against misuse, loss, destruction, alterations or deletions thereof.
- Conflict of interest: The Vendor shall disclose to BANK in writing, all actual and potential conflicts of interest that exist, arise or may arise (either for the Vendor or the Bidder's team) in the course of performing the Service(s) as soon as practical after it becomes aware of that conflict.
- The successful Bidder is required to execute a Non-Disclosure Agreement to the bank as per bank's format before or at the time of execution of the Service Level Agreement.

16. Award of Contract

The bidder who qualifies in the technical evaluation will qualify for commercial evaluation. The bidder whose bid has been determined to be responsive and who quotes the lowest price will be treated as L1 Bidder.

17. Compliance With Laws

- a. The selected service provider hereto agrees that it shall comply with Labour Laws and all applicable union, state and local laws, ordinances, regulations, CVC / RBI guidelines / statutory requirements and codes in performing its obligations hereunder, including the procurement of licenses, permits and certificates and payment of taxes

where required at no additional cost to the Bank applicable to bidder scope of work in this RFP.

b. The selected service provider has represented that their company holds all valid, licenses/registrations as may be required under the laws prevalent from time to time, in particular but not limited to, The Contract Labor (Abolition and Regulation Act) and other labor laws. The service provider shall ensure that all such registrations/licenses where required, are kept valid and subsisting throughout the term of this agreement.

If at any time during the term of this Agreement, if UCO Bank is informed or information comes to its attention that the selected service provider is or may be in violation of any terms and conditions mutually agreed between the UCO Bank and the service provider, which proves to be unsatisfactory to the UCO Bank, then the UCO Bank shall be entitled to terminate this Agreement by giving not less than 90 days' notice in writing.

18. Force Majeure

Force Majeure is herein defined as any cause, which is beyond the control of the selected bidder or the Bank as the case maybe which they could not foresee or with a reasonable amount of diligence could not have foreseen and which substantially affect the performance, such as:

- Natural phenomenon, including but not limited to floods, droughts, earthquakes, epidemics,
- Situations, including but not limited to war, declared or undeclared, priorities, quarantines, embargoes,
- Terrorist attacks, public unrest in work area,

Provided either party shall within ten (10) days from the occurrence of such a cause notify the other in writing of such causes. The Selected bidder or the Bank shall not be liable for delay in performing his / her obligations resulting from any Force Majeure cause as referred to and / or defined above.

19. Completeness of the Project

The project will be deemed as incomplete if the desired objectives of the project as mentioned in Section "Scope of Work" of this document are not achieved.

20. Acceptance Testing

The Bank will carry out the acceptance tests as per Scope of work Part – IV supplied & implemented by the selected bidder as a part of the Project. The Vendor shall assist the

Bank in all acceptance tests to be carried out by the Bank. The provisioned items will be deemed accepted only on successful acceptance of those products and the vendor would need to provision insurance of those items till successful acceptance. The Bank at its discretion may modify, add or amend the acceptance tests which then will have to be included by the vendor. The Vendor shall arrange for the tests at the relevant sites in the presence of the officials of the Bank. The Vendor should ensure that the tests will involve trouble-free operation of the complete system apart from physical verification and testing and that there shall not be any additional charges payable by the Bank for carrying out this acceptance test.

21. Order Cancellation

The Bank reserve its right to cancel the order in the event of one or more of the following situations, that are not occasioned due to reasons solely and directly attributable to the Bank alone:

- i. The bidder commits a breach of any of the terms and conditions of the offer or any of the terms and conditions of the Purchase Order / SLA.
- ii. Serious discrepancy in the quality of service expected during the implementation, rollout and subsequent maintenance process.
- iii. The bidder goes into liquidation voluntarily or otherwise.
- iv. An attachment is levied or continues to be levied for a period of 7 days upon the effects of the order.
- v. The progress regarding execution of the order accepted made by the vendor is found to be unsatisfactory.
- vi. Non-compliance of the scope of the job.
- vii. Repetitive failure of the deployed personnel to perform the job to the satisfaction of the bank.
- viii. On the events of data piracy / privacy / system failures / security failures.
- ix. If deductions on account of liquidated damages exceed more than 10% of the total order price.

In case of cancellation of order

- i. In case the selected bidder fails to deliver the ordered hardware, software , services and FM resources as stipulated in the delivery schedule, UCO BANK reserves the right to procure these deliverable from alternate sources at the risk, cost and responsibility of the selected bidder with the capping of 125% of the original quoted cost for such deliverable as per commercial bid.
- ii. If the bidder does not perform satisfactorily or delays execution of order, UCO Bank reserves the right to get the balance order executed by another party of its choice by giving 30 days' notice for the same. In this event the bidder is bound to make good with the capping of 125% of the original quoted cost for such deliverable as per commercial bid, which UCO Bank may have to incur in executing the balance order. This clause is applicable, if for any reason, the order is cancelled.

- iii. UCO Bank reserves the right to recover any dues payable by the bidder under the contract from any amount outstanding to the credit of the bidder, including the bills and /or invoking the Bank Guarantee under this purchase order.
- iv. In case of cancellation of order, any advance payments (except payment against ATS) made by the Bank to the Vendor for implementation of project, would necessarily have to be returned to the Bank, if bidder fail to return such payment within 30 days, then vendor have to be returned amount to the Bank with interest @ 15% per annum , further the Vendor would also be required to compensate the Bank for any direct loss suffered by the Bank due to the cancellation of the contract/purchase order and any additional expenditure to be incurred by the Bank to appoint any other Vendor. This is after repaying the original amount paid.
- v. Vendor should be liable under this section if the contract/ purchase order has been cancelled in case sum total of penalties and deliveries exceeds 10% of the TCO.

In case of order cancellation Bank will notify selected bidder with 90 days' notice period inclusive of 30 days cure period before cancellation of the Order. However, it is clarified that the notice should specifically contain that the 90 days period for cancellation is inclusive of cure period of 30 days, if the Vendor fails to cure within 30 days time the notice for cancellation will become absolute.

22. Indemnity

Selected bidder shall indemnify, protect and save the Bank and hold the Bank harmless from and against all claims, losses, costs, damages, expenses, action suits and other proceedings, (including reasonable attorney fees), relating to or resulting directly or indirectly from

- a) an act or omission of the service provider and /or its employees, agents, sub-contractors in performance of the obligations under this RFP; and/or
- b) material breach of any of the terms of this RFP or breach of any representation or false representation or inaccurate statement or assurance or covenant or warranty of the service provider under this RFP; and/or,
- c) Bank's authorized/ bona-fide use of the deliverables and/or the services provided by the service provider under this RFP; and/or
- d) Infringement of any patent, trademarks, copyrights etc. Or such other statutory infringements in respect of all components provided to fulfil the scope of this project.

Vendor shall further indemnify the Bank against any loss or damage to the Bank premises or property, loss of life, solely attributable, due to the acts of the Vendor's employees or representatives. The Vendor shall further indemnify the Bank against any loss or damage arising out of claims of infringement of third-party copyright, patents, or other intellectual property, and third-party claims on the Bank for malfunctioning of the equipment or software or deliverables at all points of time, provided however,

- i. the Bank notify the vendor in writing immediately on becoming aware of such claim,
- ii. the Vendor has sole control of defence and all related settlement negotiations,
- iii. the Bank provides the Vendor with the assistance, information and authority reasonably necessary to perform the above, and
- iv. The Bank does not make any statement or comments or representations about the claim without prior written consent of the Vendor, except under due process of law or order of the court.

It is clarified that the vendor shall in no event enter into a settlement, compromise or make any statement (including failure to take appropriate steps) that may be detrimental to the Bank (and/or its customers, users and service providers) rights, interest and reputation. Vendor shall be responsible for any loss of life, etc, due to acts of Vendor's representatives, and not just arising out of gross negligence or misconduct, etc, as such liabilities pose significant risk. Vendor should take full responsibility for its and its employee's actions.

The vendors should indemnify the Bank (including its employees, directors or representatives) from and against claims, losses, and liabilities arising from:

- Non-compliance of the vendor with applicable Laws / Governmental Requirements IP infringement ;
- Negligence or gross misconduct attributable to the Vendor, its employees, and agents
Breach of any terms of RFP, Representation or Warranty
- Act or omission in performance of service.

Further,

- i. Vendor's aggregate liability in connection with obligations undertaken as a part of the RFP regardless of the form or nature of the action giving rise to such liability (whether in contract, tort or otherwise), shall be at actual and limited to the Total Contract Value.
- ii. Vendor's liability in case of claims against the Bank resulting from Wilful Misconduct or Gross Negligence of Bidder, its employees and Subcontractors or from infringement of patents, trademarks, copyrights or such other Intellectual Property Rights or breach of confidentiality obligations shall be unlimited.
- iii. Bank shall not be held liable for any responsibility or claim / litigation arising out of the use of any third party software or modules supplied by Bidder as part of procurement under the RFP.
- iv. Under no circumstances bank shall be liable to the selected Bidder for direct, indirect, incidental, consequential, special or exemplary damages arising from

termination of this Agreement, even if UCO Bank has been advised of the possibility of such damages, such as, but not limited to, loss of revenue or anticipated profits or lost business.

- v. Subject to any law to the contrary, and to the maximum extent permitted by law Bank shall not be liable to vendor for any consequential/ incidental, or indirect damages arising out of this agreement.

Indemnity would be limited to court; tribunal or arbitrator awarded damages and shall exclude indirect, consequential and incidental damages. However indemnity would cover damages, loss or liabilities suffered by the Bank arising out of claims made by its customers and/or regulatory authorities.

The vendor shall not indemnify the Bank for

- i. Any loss of profits, revenue, contracts, or anticipated savings or
- ii. Any consequential or indirect loss or damage however caused, provided that indemnity would cover damages, loss or liabilities suffered by the Bank arising out of Claim made by Regulatory Authorities for reasons attributable to breach of services provided/ obligation under this document and by the Service Provider.

23. Publicity

Any publicity by the selected bidder in which the name of the Bank is to be used should be done only with the explicit written permission of the Bank. The Bidder shall not make or allow making a public announcement or media release about any aspect of the Contract unless The Bank first gives the Bidder its prior written consent.

24. Privacy and Security Safeguards

The selected bidder shall not publish or disclose in any manner, without the Bank's prior written consent, the details of any security safeguards designed, developed, or implemented by the selected bidder under this contract or existing at any Bank location. The Selected bidder shall develop procedures and implementation plans to ensure that IT resources leaving the control of the assigned user (such as being reassigned, removed for repair, replaced, or upgraded) are cleared of all Bank Data and sensitive application software. The Selected bidder shall also ensure that all subcontractors who are involved in providing such security safeguards or part of it shall not publish or disclose in any manner, without the Bank's prior written consent, the details of any security safeguards designed, developed, or implemented by the selected bidder under this contract or existing at any Bank location.

25. Technological Advancements

The Selected bidder shall take reasonable and suitable action, taking into account economic circumstances, at mutually agreed increase / decrease in charges, and the Service Levels, to provide the Services to the Bank at a technological level that will enable the Bank to take advantage of technological advancement in the industry from time to time.

26.Exit Option And Contract Re-Negotiation

The Bank reserves the right to cancel the contract in the event of happening one or more of the following Conditions:

- Failure of the Selected bidder to accept the contract / purchase order and furnish the Performance Guarantee within 30 days of receipt of purchase contract;
- Delay in offering;
- Delay in commissioning project beyond the specified period;
- Delay in completing commissioning / implementation and acceptance tests / checks beyond the specified periods;

Bank shall notify selected bidder with 90 days' notice period inclusive of 30 days cure period before cancellation of the Order. However, it is clarified that the notice should specifically contain that the 90 days period for cancellation is inclusive of cure period of 30 days, if the Vendor fails to cure within 30 days time the notice for cancellation will become absolute.

In addition to the cancellation of purchase contract, Bank reserves the right to appropriate the damages through encashment of Bid Security / Performance Guarantee given by the Selected Bidder.

Notwithstanding the existence of a dispute, and/or the commencement of arbitration proceedings, the Selected Bidder will be expected to continue the services. The Bank shall have the sole and absolute discretion to decide whether proper reverse transition mechanism over a period of 6 to 12 months, has been complied with. In the event of the conflict not being resolved, the conflict will be resolved through Arbitration.

The Bank and the Selected Bidder shall together prepare the Reverse Transition Plan. However, the Bank shall have the sole decision to ascertain whether such Plan has been complied with.

Reverse Transition mechanism would typically include service and tasks that are required to be performed / rendered by the Selected Bidder to the Bank or its designee to ensure smooth handover and transitioning of Bank's deliverables, maintenance and facility management. However during transitioning period payment will be made to vendor as per payment terms.

27.Signing of Contract

The selected bidder(s) shall be required to enter into a service level agreement (SLA) with UCO Bank, within 15 days of the award of the Bid through a Letter of Intent or within such extended period as may be specified.

The SLA shall be based on the requirements of this RFP, the terms and conditions of purchase order, the letter of acceptance and such other terms and conditions as may be determined by the Bank to be necessary for the proper performance of the work in accordance with the Bid and the acceptance thereof, with terms and conditions contained in a Memorandum of Understanding to be signed at the time of execution of the Form of Contract.

The selected bidder will also sign a Non-Disclosure Agreement and Deed of Indemnity with the Bank on a format prescribed by the Bank.

28. Technical Inspection and Performance Evaluation

UCO Bank reserves its right to carry out a technical inspection and performance evaluation (bench-marking) of the offered item(s). Bank may instruct eligible bidders to make technical presentation at Bank's Head Office, Kolkata for the proposed solution / service. Bidders will have to make such presentation at their own cost.

29. Verification

UCO Bank reserves the right to verify any or all statements made by the vendor in the Bid document and to inspect the vendor's facilities, if necessary, to establish to its satisfaction about the vendor's capacity to perform the job.

30. Termination

UCO BANK reserves the right to cancel the work/purchase order or terminate the SLA by giving 90 (ninety) days' prior notice in writing inclusive of 30 days cure period and recover damages, costs and expenses etc., incurred by Bank under the following circumstances:

- a. The selected bidder commits a breach of any of the terms and conditions of this RFP or the SLA to be executed between the Bank and the selected Bidder.
- b. The selected bidder goes into liquidation, voluntarily or otherwise.
- c. The selected bidder violates the Laws, Rules, Regulations, Bye-Laws, Guidelines, and Notifications etc., applicable to the bidder under performance of the RFP.
- d. An attachment is levied or continues to be levied for a period of seven days upon effects of the bid.
- e. The selected bidder fails to complete the assignment as per the timelines prescribed in the Work Order/SLA and the extension, if any allowed.
- f. Deductions on account of liquidated damages exceed more than 10% of the total work order.

g. In case the selected bidder fails to deliver the resources as stipulated in the delivery schedule, UCO BANK reserves the right to procure the same or similar resources from alternate sources at the risk, cost and responsibility of the selected bidder.

h. After award of the contract, if the selected bidder does not perform satisfactorily or delays execution of the contract, UCO BANK reserves the right to get the balance contract executed by another party of its choice by giving one month's notice for the same. In this event, the selected bidder is bound to make good the additional expenditure, which UCO BANK may have to incur in executing the balance contract. This clause is applicable, if the contract is cancelled for any reason, whatsoever.

i. UCO BANK reserves the right to recover any dues payable by the selected Bidder from any amount outstanding to the credit of the selected bidder, including the adjustment of pending bills and/or invoking the Performance Bank Guarantee under this contract. The rights of the Bank enumerated above are in addition to the rights/remedies available to the Bank under the Law(s) for the time being in force.

31.Termination for Convenience

The Bank, by written notice sent to the vendor, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Bank's convenience, the extent to which performance of work under the Contract is terminated and the date upon which such termination becomes effective.

In case of Termination of Convenience Bank will provide notice period of 90 days inclusion cure period of 30 days. However, it is clarified that the notice should specifically contain that the 90 days period for cancellation is inclusive of cure period of 30 days, if the Vendor fails to cure within 30 days time the notice for cancellation will become absolute.

32.Termination for Insolvency

The Bank may at any time terminate the Contract by giving written notice (90 days' notice period) to the Bidder, if the Bidder becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Bidder, provided that such termination will not prejudice or affect any right of action or remedy, which has accrued or will accrue thereafter to the Bank.

33.Termination for Default

The Bank, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the bidder, may terminate this Contract in whole or in part, if the bidder fails to perform any obligation(s) under the Contract.

In case of Termination for Default Bank will provide notice period of 90 days inclusion cure period of 30 days. However, it is clarified that the notice should specifically

contain that the 90 days period for cancellation is inclusive of cure period of 30 days, if the Vendor fails to cure within 30 days' time the notice for cancellation will become absolute.

34. Consequences of Termination

In the event of termination of the Contract due to any cause whatsoever, (whether consequent to the stipulated term of the Contract or otherwise), UCO Bank shall be entitled to impose any such obligations and conditions and issue any clarifications as may be necessary to ensure an efficient transition and effective business continuity of the Service(s) which the Vendor shall be obliged to comply with and take all available steps to minimize loss resulting from that termination/breach, and further allow the next successor Vendor to take over the obligations of the erstwhile Vendor in relation to the execution / continued execution of the scope of the Contract.

In the event that the termination of the Contract is due to the expiry of the term of the Contract, a decision not to grant any (further) extension by UCO Bank, the bidder herein shall be obliged to provide all such assistance to the next successor bidder or any other person as may be required and as UCO Bank may specify including training, where the successor(s) is a representative/personnel of UCO Bank to enable the successor to adequately provide the Service(s) hereunder, even where such assistance is required to be rendered for a reasonable period that may extend beyond the term/earlier termination hereof.

Nothing herein shall restrict the right of UCO Bank to invoke the Performance Bank Guarantee and other guarantees, securities furnished, enforce the Deed of Indemnity and pursue such other rights and/or remedies that may be available to UCO Bank under law or otherwise.

The termination hereof shall not affect any accrued right or liability of either Party nor affect the operation of the provisions of the Contract that are expressly or by implication intended to come into or continue in force on or after such termination.

35. Compliance With Applicable Laws of India

The selected bidder shall undertake to observe, adhere to, abide by, comply with and notify the Bank about all laws in force or as are or as made applicable in future, pertaining to or applicable to them, their business, their employees or their obligations towards them and all purposes of this tender and shall indemnify, keep indemnified, hold harmless, defend and protect the Bank and its employees/officers/staff/personnel/representatives/agents from any failure or omission on its part to do so and

against all claims or demands of liability and all consequences that may occur or arise for any default or failure on its part to conform or comply with the above and all other statutory obligations arising there from.

All the employees/operator deployed by the vendor for the digitization activity must comply with government's rules and regulations like minimum wages act, Provident fund and ESIC facility standard. (Proof of compliance and labour license needs to be submitted along with the quotation).

This indemnification is only a remedy for the Bank. The vendor is not absolved from its responsibility of complying with the statutory obligations as specified above. Indemnity would be limited to court awarded damages and shall exclude indirect, consequential and incidental damages. However indemnity would cover damages, loss or liabilities suffered by the bank arising out of claims made by its customers and/or regulatory authorities.

The selected bidder confirms to Bank that it complies with all Central, State, Municipal laws and local laws and rules and regulations and shall undertake to observe, adhere to, abide by, comply with and notify Bank about compliance with all laws in force including Information Technology Act 2000, or as are or as made applicable in future, pertaining to or applicable to them, their business, their employees or their obligations towards them and for all purposes of this Contract, and shall indemnify, keep indemnified, hold harmless, defend and protect Bank and its officers/staff/personnel/representatives/agents from any failure or omission on its part to do so and against all claims or demands of liability and all consequences that may occur or arise for any default or failure on its part to conform or comply with the above and all other statutory obligations arising there from. The Bidder shall promptly and timely obtain all such consents, permissions, approvals, licenses, etc., as may be necessary or required for any of the purposes of this project or for the conduct of their own business under any applicable Law, Government Regulation / Guidelines and shall keep the same valid and in force during the term of the project, and in the event of any failure or omission to do so, shall indemnify, keep indemnified, hold harmless, defend, protect and fully compensate Bank and its employees/officers/staff/personnel/representatives/agents from and against all claims or demands of liability and all consequences that may occur or arise for any default or failure on its part to conform or comply with the above and all other statutory obligations arising there from and Bank will give notice of any such claim or demand of liability within reasonable time to the Bidder.

36. Dispute Resolution Mechanism

- a. The Bidder and The Bank shall endeavour their best to amicably settle all disputes arising out of or in connection with the Contract in the following manner:

- i. The Party raising a dispute shall address to the other Party a notice requesting an amicable settlement of the dispute within seven (7) days of receipt of the notice.
 - ii. The matter will be referred for negotiation between Deputy General Manager of The Bank / Purchaser and the Authorised Official of the Bidder. The matter shall then be resolved between them and the agreed course of action documented within a further period of 15 days.
- b. In case any dispute between the Parties, does not settle by negotiation in the manner as mentioned above, the same may be resolved exclusively by arbitration and such dispute may be submitted by either party for arbitration within 20 days of the failure of negotiations. Arbitration shall be held in Kolkata and conducted in accordance with the provisions of Arbitration and Conciliation Act, 1996 or any statutory modification or re-enactment thereof. Each Party to the dispute shall appoint one arbitrator each and the two arbitrators shall jointly appoint the third or the presiding arbitrator.
- c. The "Arbitration Notice" should accurately set out the disputes between the parties, the intention of the aggrieved party to refer such disputes to arbitration as provided herein, the name of the person it seeks to appoint as an arbitrator with a request to the other party to appoint its arbitrator within 45 days from receipt of the notice. All notices by one party to the other in connection with the arbitration shall be in writing and be made as provided in this tender document.
- d. The arbitrators shall hold their sittings at Kolkata. The arbitration proceedings shall be conducted in English language. Subject to the above, the courts of law at Kolkata alone shall have the jurisdiction in respect of all matters connected with the Contract/Agreement even though other Courts in India may also have similar jurisdictions. The arbitration award shall be final, conclusive and binding upon the Parties and judgment may be entered thereon, upon the application of either party to a court of competent jurisdiction. Each Party shall bear the cost of preparing and presenting its case, and the cost of arbitration, including fees and expenses of the arbitrators, shall be shared equally by the Parties unless the award otherwise provides.
- e. The Bidder shall not be entitled to suspend the Service/s or the completion of the job, pending resolution of any dispute between the Parties and shall continue to render the Service/s in accordance with the provisions of the Contract/Agreement notwithstanding the existence of any dispute between the Parties or the subsistence of any arbitration or other proceedings.

37. Arbitration

All dispute or differences whatsoever arising between the selected bidder and the Bank out of or in relation to the construction, meaning and operation, with the selected bidder, or breach thereof shall be settled amicably. If, however, the parties are not able to resolve any dispute or difference aforementioned amicably, the same shall be settled by arbitration in accordance with the Rules of Arbitration of the Indian Council of Arbitration and the award made in pursuance thereof shall be binding on the parties. The Arbitrator / Arbitrators shall give a reasoned award.

Work under the Contract shall be continued by the Selected bidder during the arbitration proceedings unless otherwise directed in writing by the Bank unless the matter is such that the work cannot possibly be continued until the decision of the arbitrator or of the umpire, as the case may be, is obtained and save as those which are otherwise explicitly provided in the Contract, no payment due to payable by the Bank, to the Selected bidder shall be withheld on account of the on-going arbitration proceedings, if any unless it is the subject matter or one of the subject matters thereof. The venue of the arbitration shall be at KOLKATA, INDIA.

38. Applicable Law and Jurisdiction of Court

The Contract with the Selected bidder shall be governed in accordance with the Laws of India for the time being enforced and will be subject to the exclusive jurisdiction of Courts at Kolkata (with the exclusion of all other Courts).

39. Adherence of Cyber Security Policy

Bidders are liable for not meeting the security standards or desired security aspects of all the ICT resources as per Bank's IT/Information Security / Cyber Security Policy. The IT /Information Security/ Cyber Security Policy will be shared with successful bidder. Bidders should ensure Data Security and protection of facilities/application managed by them.

The deputed persons should aware about Bank's IT/IS/Cyber security policy and have to maintain the utmost secrecy & confidentiality of the bank's data including process performed at the Bank premises. At any time, if it comes to the notice of the bank that data has been compromised/disclosed/misused/ misappropriated then bank would take suitable action as deemed fit and selected vendor would be required to compensate the bank to the fullest extent of loss incurred by the bank.

Bidder has to agree and provide undertaking not to disclose any Bank information and will maintain confidentiality of Bank information as per policy of the Bank and will sign "Non-Disclosure Agreement" document provided by Bank.

The legal and regulatory requirements, including data protection, intellectual property rights, copy right, all the relevant regulations for sub-contracting; including the controls that need to be implemented shall be included in the supplier agreement.

All information resources (online/in-person) of the vendors and its partners shall be made accessible to Reserve Bank of India as and when sought.

Credentials of vendor/third party personnel accessing and managing the bank's critical assets shall be maintained and shall be accordance with bank's policy.

The Bank shall evaluate, assess, approve, review, control and monitor the risks and materiality of vendor/outsourcing activities and bidder shall ensure to support baseline system security configuration standards. The Bank shall also conduct effective due diligence, oversight and management of third party vendors/service providers & partners.

Vendor criticality assessment shall be conducted for all partners & vendors. Appropriate management and assurance on security risks in outsources and partner arrangements shall be ensured.

40. Limitation of Liability

- i. For breach of any obligation mentioned in this document, subject to point no. iii, in no event selected bidder shall be liable for damages to the Bank arising under or in connection with this agreement for an amount exceeding the total project cost/contract value.
- ii. Service Provider will ensure Bank's data confidentiality and shall be responsible for liability arising in case of breach of any kind of security and/or leakage of confidential customer/Bank's related information to the extent of loss cause.
- iii. The limitations set forth in point no. i shall not apply with respect to:
 - a) claims that are the subject of indemnification pursuant to Intellectual Property Rights and Ownership.
 - b) damages occasioned by the gross negligence or willful misconduct of Service Provider.
 - c) damages occasioned by Service Provider for breach of confidentiality obligations.
 - d) Regulatory or statutory fines imposed by the Government or Regulatory agency or non-compliance of statutory or regulatory guidelines applicable to the project.

41. Privacy & Security Safeguards

The selected bidder shall not publish or disclose in any manner, without the Bank's prior written consent, the details of any security safeguards designed, developed, or implemented by the selected bidder under this contract or existing at any Bank location.

The Selected bidder shall develop procedures and implementation plans to ensure that IT resources leaving the control of the assigned user (such as being reassigned, removed for repair, replaced, or upgraded) are cleared of all Bank data and sensitive application software. The Selected bidder shall also ensure that all subcontractors who are involved in providing such security safeguards or part of it shall not publish or disclose in any manner, without the Bank's prior written consent, the details of any security safeguards designed, developed, or implemented by the selected bidder under this contract or existing at any Bank location.

42. Right to Alter Quantities

The Bank reserves the right to alter the number of hardware hardware/software/licenses specified in the tender in the event of changes in plans of the Bank. Any decision of UCO BANK in this regard shall be final, conclusive and binding on the bidder. The bank reserves the right to place order for additional hardware/software/licenses at the agreed price during the contract period with the same terms and conditions. Banks is not obligate to purchase all the quantity of the hardware/software/licenses as mentioned above. Bank reserves the right to alter the quantities at any time not exceeding 10% of the total contract value without prior notice to the selected bidder(s).

Non-Disclosure Agreement

By virtue of Contract, as and when it is entered into between the Bank and the bidder, and its implementation thereof, the bidder may have access to the confidential information and data of the Bank and its customers. The bidder will enter into a Non-Disclosure Agreement to maintain the secrecy of Bank's data as per following:-

- a. That the bidder will treat the confidential information as confidential and shall not disclose to any third party. The bidder will also agree that its employees, agents, sub-contractors shall maintain confidentiality of the confidential information.
- b. That the bidder will agree that it shall neither use, nor reproduce for use in any way, any confidential information of the Bank without consent of the Bank. That the bidder will also agree to protect the confidential information of the Bank with at least the same standard of care and procedures used by them to protect its own confidential Information of similar importance. Without limitation of the foregoing, the bidder shall use reasonable efforts to advise the Bank immediately in the event that the bidder learns or has reason to believe that any person who has had access to confidential information has violated or intends to violate the terms of the Contract to be entered into between the Bank and the bidder, and will reasonably cooperate in seeking injunctive relieve against any such person.

- c. That if the bidder hires another person to assist it in the performance of its obligations under the Contract, or assigns any portion of its rights or delegates any portion of its responsibilities or obligations under the Contract to another person, it shall cause its assignee or delegate to be bound to retain the confidentiality of the confidential information in the same manner as the Bidder is bound to maintain the confidentiality. This clause will remain valid even after the termination or expiry of this agreement.

That the bidder will strictly maintain the secrecy of Bank's data.

(Tender offer forwarding letter)

Tender Ref. No.: DIT/BPR&BTD/OA/246/2020-21

Date: 18/05/2020.

**To
The Deputy General Manager
DIT, BPR & BTD
UCO Bank, Head Office
5th Floor, 3&4, DD Block, Sector-I
Salt Lake, Kolkata -700064**

Dear Sir,

Sub: RFP for Selection of System Integrator (SI) for Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software, Facility Management Services for Finacle Core Banking (Version 10.x) and E-Banking (FEBA) at DC, DR and Near DR Site (Re-tendering) vide RFP Ref No. DIT/BPR&BTD/OA/246/2020-21 dated 18/05/2020

With reference to the above RFP, having examined and understood the instructions including all annexure, terms and conditions forming part of the Bid, we, the undersigned, hereby enclose our offer for "Selection of System Integrator (SI) for Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software, Facility Management Services for Finacle Core Banking (Version 10.x) and E-Banking (FEBA) at DC, DR and Near DR Site (Re-tendering)" mentioned in the RFP document forming Eligibility, Technical and Commercial Bids being parts of the above referred Bid.

In the event of acceptance of our Eligibility, Technical and Commercial Bids by The Bank we undertake to Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software, Facility Management Services for Finacle Core Banking (Version 10.x) and E-Banking (FEBA) at DC, DR and Near DR Site (Re-tendering) as per your purchase orders.

In the event of our selection by the Bank for Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software, Facility Management Services for Finacle Core Banking (Version 10.x) and E-Banking (FEBA) at DC, DR and Near DR Site (Re-tendering), we will submit a Performance Guarantee for a sum equivalent to 10% of the Project Cost to be valid for a period of Five years (plus 3 month of claim period) in favour of **UCO BANK** effective from the month of execution of Service Level

Agreement.

We agree to abide by the terms and conditions of this tender and our offer shall remain valid for one year from the date of commercial bid opening and it remain binding upon us which may be accepted by The Bank any time before expiry of one year.

Until a formal contract is executed, this tender offer, together with the Bank's written acceptance thereof and Bank's notification of award, shall constitute a binding contract between us.

We understand that The Bank is not bound to accept the lowest or any offer the Bank may receive.

We enclose the following:

1. Tender Fee of Rs. _____ (Rupees _____ Only) dated _____. Vide UTR No/Txn Id _____.

2. BG No _____ for Rs. _____ (Rupees _____ Only) dated _____ as EMD.

Dated this __ day of ____ 2020

Signature: _____

(In the Capacity of) _____

Duly authorized to sign the tender offer for and on behalf of

General Details of the Bidder**A. Profile of Bidder**

1. Name of bidder:

2. Location

Regd. Office:

Controlling Office:

3. Constitution

4. Date of incorporation & Date of Commencement of business:

5. Major change in Management in last three years:

6. Names of Banker /s:

7. Name and details (designation and Phone no.) of Authorized Signatory:

B. Financial Position of Bidder for the last three financial years

| | 2016-17 | 2017-18 | 2018-19 |
|------------------|---------|---------|---------|
| Operating Profit | | | |
| Net Worth | | | |
| Turnover | | | |

N.B. Enclose copies of Audited Balance Sheets along with enclosures**C. Proposed Service details in brief**

- Description of service :
- Details of similar service provided to PSU organization/BFSI in India specifying the number of Banks and branches

Details of Experience in the field of (for Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software, Facility Management Services for Finacle Core Banking (Version 10.x) and E-Banking (FEBA) at DC, DR and Near DR Site (Re-tendering))

| PSU Organization/BFSI | | |
|-----------------------|--------|----|
| Name of Organization | Period | |
| | From | To |
| | | |
| | | |

N.B. Enclose copies of Purchase Orders and references.

Place: _____

Date: _____

Signature of Bidder: _____

Name: _____

Business Address: _____

UCO BANK

Manufacturer's Authorization Form (MAF)

To
The Deputy General Manager
DIT, BPR & BTD
UCO Bank, Head Office
5th Floor, 3&4, DD Block, Sector-I
Salt Lake, Kolkata -700064

Dear Sir,

We (Name of the Manufacturer) who are established and reputable manufacturers of having factories at and do hereby authorize M/s (Name and address of Bidder) who is the bidder submitting its bid pursuant to the Request for Proposal issued by UCO Bank on behalf, to submit a Bid and negotiate and conclude a contract with you for supply of equipment manufactured by us against the Request for Proposal received from your bank by the Bidder and we have duly authorized the Bidder for this purpose.

We hereby extend our guarantee/ warranty and AMC as per terms and conditions of the RFP Noand the contract for the equipment and services offered for supply against this RFP No..... By the above-mentioned Bidder, and hereby undertake to perform the obligations as set out in the RFP No.....In respect of such equipment and services. We undertake to provide back-to-back support for spares and skill to the bidder for subsequent transmission of the same to the Bank. We also undertake to provide support services during warranty as well as AMC/ATS period if the above bidder authorized by us fails to perform in terms of the RFP. We shall continue and ensure support services to Bank either directly or Bank appointed third party vendor, regarding this decision of bank will be final and binding upon us.

We also undertake to supply and upgrade of proposed hardware/ software over a period of five (5) years and support for period of minimum seven (7) years.

Yours Faithfully

Authorized Signatory
(Name:
Phone No.:
Fax:
E-mail :)

(This letter should be on the letterhead of the Manufacturer duly signed by an authorized signatory)

Technical Requirements**Table A: Summary Sheet for minimum Hardware/Software/Solution requirement for Finacle 10.x and FEBA (Finacle Internet Banking Application)**

| Sl. No. | Used for | Processor Type and Platform/Type of Hardware / Type of solution | Hardware/Software/Solution | Quantity | | |
|---------|---|---|--|--|--|-----|
| | | | | DC | DR | NDR |
| 1 | Finacle 10.x CSIS MIS/Report, UAT, Training database (DB) | Processor for DB layer Latest RISC/EPIC type Processor from OEM IBM/Oracle/HPE for DB layer OS Platform AIX 7.2 level 0 service pack 1 or later OR Solaris 11.2 SUR 5.5 or later SUR update OR HP Unix 11.31 Sep 2014 B.11.31.1409 or later | Production Database for Finacle 10.x Enterprise Class Servers to host Core Banking Database to support 4 node RAC | 4 | 4 | 0 |
| | | | CSIS & MIS/REPORT database for Finacle 10.x CSIS DB in 2 node Active Passive node MIS/Report DB in 2 node Active Passive node | 4 | 4 | 0 |
| | | | UAT/Training/Migration Database for Finacle 10.x Mid-range servers to host Non- production UAT (2 node RAC), Training, Migration, SIT DB server and other services as per bank requirement time to time. | 1 | 6 | 0 |
| | | Processor for App and Web layer X86 platform Intel Xeon Gold 6xxx @ 3.1 GHz or above with HT, Turbo Boosting OS Platform Red Hat Enterprise Linux (RHEL) Server 7.7 (64 bit on intel) | Production Application & Web for Finacle 10.x Enterprise Class blade Servers to host production C/C++ & J2EE Application layer, Web layer HTTPS, Web layer, MIS (App), CSIS (App) | 8 (C/C++) 4 (Uniser) 2(C24) 6(J2EE) 4(HTTP) 2(CSIS APP) 2(Report/MIS APP) 2 (Additional Report) | 8 (C/C++) 4 (Uniser) 2(C24) 6(J2EE) 4(HTTP) 2(CSIS APP) 2(Report/MIS APP) 2 (Additional Report) | 0 |
| | | | UAT/Training/Migration etc. Application and Web for Finacle 10.x and Finacle Assure Enterprise Class Rack Servers to host Non-production UAT, Training, Migration, SIT etc. . | | 2(C/C++) 2(J2EE) 2(HTTP) 1(Training) 1(Migration) 1(SIT/Development) 5 (Finacle Assure) | 0 |
| | | | 3rd Party Software & Middleware license and its support service for Finacle 10.x For Finacle 10.x application server J2EE JBOSS EAP 7.1.2 (64 bit) with | | | |

| | | | | | | |
|---|---|--|---|---|---|---|
| | | | java-1.8.0-openjdk-1.8.0.191.b12-o.el6_10.x86_64 rpm with developer package For Finacle 10.x Web Server JBCS or Apache HTTP server version 2.4.23 with mod cluster 1.3.5 Final & Software load balancer between web and J2EE layer from JBCS or Apache HTTP Other subscription: Premium Enterprise support for RHEL, subscription with RED Hat to gain access of respective tar/zip download and Premium Enterprise support for above mentioned 3rd party software. | Bidder need to quote as per requirement | | 0 |
| 2 | FEBA DB, APP, WEB, DEH, FAS UAT environment | Processor for App and Web layer X86 platform Intel Xeon Gold 6xxx @ 3.1 GHz or above with HT, Turbo Boosting OS Platform Red Hat Enterprise Linux (RHEL) Server 7.7 (64 bit on intel) | Enterprise Class blade Servers for Finacle E- Banking (FEBA+DEH) Database to support 2 node RAC | 2 | 2 | 0 |
| Enterprise Class blade Servers for Finacle FAS Database to support 2 node RAC | | | 2 | 2 | 0 | |
| Enterprise Class Blade Servers Finacle Online + DEH Application Serve for Finacle E- Banking (FEBA) | | | 3 | 3 | 0 | |
| Enterprise Class Blade Servers FAS Application Serve | | | 2 | 2 | 0 | |
| Enterprise Class Rack Servers Web (HTTP) for Finacle E- Banking (FEBA) | | | 3 | 3 | 0 | |
| HA Proxy | | | 2 | 2 | 0 | |
| Enterprise Class Rack Servers for UAT for FEBA DB, Application, DEH,FAS, WEB | | | 0 | 4 | 0 | |
| Software | | | | | 0 | |
| | | Bidder needs to provide below mentioned third party Software and its support service during contract period: k. JRE 1.8 (DEH and Microservices) l. JBOSS EAP 7.1.2 (J2EE Application Server) m. Python 2.7 (Database Server DEH) n. JBCS or Apache httpd 2.4.23 (Web Server) | As per requirement As per requirement As per requirement As per requirement | | | |

| | | | | |
|--|--|---|---|--|
| | | <p>o. Redis Server 3.2 with enterprise support (For distributed caching DEH and Microservices)</p> <p>p. Consul 1.0.3 & Consul template 0.19.4 (for communicating between Service Registry consul and Load balancer)</p> <p>q. Node JS 8.9.4 (Omni Channel REST APIs with node js based O-Auth Provider Within Omni Channel) & Qty:</p> <p>r. HA Proxy 1.8.3</p> <p>(HA Proxy will be used for as a webserver/load-balancer for servlet application and load-balancer for Rest APIs. Load balancer is mandatory for Rest APIs in OCH.HA Proxy would be needed to act as a load balancer for the DEH REST APIs which would be consumed by external applications like Mobile Banking, IVR etc. The load coming in to access the DEH REST APIs would be distributed using HA Proxy. For deployment of HA proxy bidder needs to factor additional 2 no. of X86 Type-8 servers with RHEL OS at each DC & DR location as per revised commercial BOM in corrigendum. HA proxy should deploy with high availability mode at DC & DR both locations.)</p> <p>s. Graylog 2.3.2 (consolidate logs for analysis)</p> <p>t. JRE 1.8</p> <p>k. JDK 1.8</p> <p>Important note: Selected bidder will have to download all the necessary third party software (both</p> | <p>3 Master Instances DC & DR each location 3 Slave Instances DC & DR each location 2 UAT Instance at DR</p> <p>As per requirement</p> <p>As per requirement</p> <p>As per requirement</p> <p>As per requirement.</p> <p>20 no. for client PC</p> <p>20 no. for client PC</p> | |
|--|--|---|---|--|

| | | | | | | |
|----|---|---|--|---|---|---|
| | | | for Finacle 10.x & FEBA application) mentioned above and also as per Scope of work & Annexure D as advise by Application OEM time to time during contract period.. The selected bidder will be required to install same in respective servers in non-production, production (DC side) and also same in DR site where Finacle 10.x & FEBA application will be deployed. | | | |
| 9 | Storage for Finacle 10.x, FEBA, Mobile Banking, GBM, LAPS etc. | All Flash type Storage | Enterprise Class Storage (all Flash) with RAID 6 support 500000 IOPS or above from day 1 for DC & DR Storage and 200000 IOPS and or from day 1 for NDR storage Usable Storage Space: DC:350 TB DR:600 TB NDR:10 TB In all three sites mentioned above, effective usable capacity should NOT include effect of compression, de-duplication or thin provisioning for storage capacity and its scalability. The usable capacity should be clearly available. | 1 | 1 | 1 |
| 10 | NAS for Finacle App layer | Enterprise Network Attached Storage (NAS) having all flash drives | All flash drives to support 50000 NFS IOPS/concurrent connection or above with response time of < 2 milliseconds having usable 20 TB (RAID 6) and minimum 65534 subdirectories for a given directory from day 1 | 1 | 1 | 0 |
| 11 | Disk based backup for instant backup and restoration | Enterprise class disk-based backup solution | Offered device shall be offered with Minimum of 150 TB of usable space scalable to more than 300 TB usable space. | 1 | 1 | 0 |
| 12 | Backup software for taking backup | Online backup of databases namely Oracle, SQL, DB2 and OS namely Windows, Linux, Unix etc | Online Backup Software for the proposed database servers and existing database server of other applications. 150 TB front end capacity licenses. | 1 | 1 | 0 |
| 13 | Tape Library for taking backup | Tape Library built with custom rack hosting accessor, tape drives and cartridge slots | Enterprise Tape Library with 200 LTO 8 Tape and Minimum No. of tape drives: 2 X LTO 7 FC drives and 10 X LTO 8 FC drives. | 1 | 1 | 0 |

| | | | | | | |
|----|--|---|---|--|---|---|
| 14 | SAN Switch/Director for servers and Storage connectivity | Latest generation 32/16 Gbps SAN switch/Director FC Switches with, enterprise-class, high availability features | SAN Switches/director for DC and DR Site | 2 | 2 | 0 |
| 15 | Web and APP layer Application Delivery Controller (ADC) and Load Balancer Devices | Appliance base Citrix/RADWARE/F5 Application Delivery Controller (ADC) and Load Balancer appliance | Hight End Application Delivery Controller (ADC) and Load Balancer appliance for Finacle 10 (Web & App) and FEBA (Web & APP) in Active-Active mode. | 4 pair (HA) for production | 4 pair (HA) for production 1 for UAT | 0 |
| 16 | EMS tool | EMS tool solution | EMS tool covering features like call & helpdesk management, change management, patch management, asset management (DC,DR infrastructure and network devices) along with Server, database monitoring & network monitoring , overall reporting bank as a whole irrespective of any location | <p>Bidder needs to provide all OS, software, license and hardware for EMS solution. EMS tool covering features like call & IT service desk/helpdesk management, change management, patch management, asset management (DC, DR infrastructure and network devices) along with Server, database monitoring & network monitoring, overall reporting to bank irrespective of any location. Bidder should supply, install and maintain EMS tool related hardware & software at DC and DR both locations. However, EMS tools database should be in high availability mode at DC site only and whole EMS tool solution should be able to run from DR also during DR-Dill or in case of any exigency.</p> <p>Licenses requirement:</p> <p>Call/Helpdesk with Change management feature – 50 nos. of concurrent users.</p> <p>Additionally, bidder should implement call/helpdesk management solution such as way that branch/corporate office users should be able to access call management/helpdesk portal/URL for call ticketing/call lodge at any point of time and that should be attended by L1 & L2 support team for resolution accordingly.</p> <p>DC, DR infrastructure monitoring and Patch management for 500 devices.</p> <p>Middleware monitoring (JOBSS): 40 (DC & DR).</p> <p>Network monitoring and configuration automation for 8000 devices.</p> | | |

| | | | | |
|--|--|--|--|---|
| | | | | <p>Asset management for 8000 devices.</p> <p>Database monitoring 30 nos. of various application DB instances.</p> <p>Bidder needs to factor EMS hardware in such a way that any point time same hardware is able to handle the load from day one implementation and system resources should not go beyond 70% at any point of time during contract period. If any point of time during contract period system resources utilization goes beyond 70%, bidder needs to upgrade EMS hardware within 1 month without any additional cost to Bank.</p> |
|--|--|--|--|---|

Table B: Minimum Technical Requirement of Database Servers (Production and Non-Production) on Unix platform

DC Site: 8 no. Enterprise class Physical Servers with Operation system (AIX/Solaris/HP UX) from OEM IBM/ORACLE/HPE for hosting production Database (DB) as mentioned below:

TYPE-1(RISK/EPIC based Server): 4 no. Physical Servers will be used for 4-Node RAC for Core Banking System (CBS) DB

TYPE-2 (RISK/EPIC based Server): 4 no. Physical Servers used for hosting 2 node CSIS DB (Active-Passive) and 2 node MIS DB (Active-Passive).

8 Servers should be deployed in 8 separate physical racks.

DR Site: 8 no. Enterprise class Physical Servers with Operation system (AIX/Solaris/HP UX) from OEM IBM/ORACLE/HPE for hosting production Database (DB) as mentioned below:

TYPE-1 (RISK/EPIC based Server): 4 no. Physical Servers will be used for 4-Node RAC for Core Banking System (CBS) DB

TYPE-2 (RISK/EPIC based Server): 4 no. Physical Servers used for hosting 2 node CSIS DB (Active-Passive) and 2 node MIS DB (Active-Passive). CSIS and Report DB should be run in hard/virtual partition. All hard/virtual partition nodes should be host in physical/logically separated partition having dedicated CPU, RAM, I/Os

8 Servers should be deployed in 8 separate physical racks.

Above mentioned Each Server should have minimum 50% additional scalability for future growth

DC & DR Site: – 6 no. of RISK/EPIC based Physical Servers at DR site and 1 no. of RISK/EPIC based Physical Servers DC site (TYPE-3 RISK/EPIC based Server for Report/UAT/Training and TYPE-4 RISK/EPIC based Server for Migration/development) for hosting of Non-Production DBs like UAT, Training, Development and Migration DB. All non-production DB node should be hosted in physical/logical portioning.

All servers should be supplied with Standard server Rack along with required redundant PDUs

Enterprise class RISK/EPIC processor based server for production Data base (TYPE1 & TYPE-2 RISK/EPIC based Server)

| Sl. No. | Description | IBM | Oracle | HPE | Compliance (Yes/No) |
|---------|---|---|--|--|---------------------|
| 1 | Model from day-1 | E980 | M8-8 | Superdome 2 | |
| 2 | Processor/Server Type & clock speed | 3.9 - 4.0 GHz, POWER9 Processor | 5.0 GHz SPARC M8 Processor | 2.66 Ghz i6 Itanium 9760 | |
| 3 | Total no. of cores per Server from day 1 /phase 1 upgrade/phase 2 upgrade/Maximum Upgrade | TYPE-1: 36/42/54/128 TYPE-2: 32 /40/52/128 | TYPE-1: 42/50/64/128 TYPE-2: 37/46/60/128 | TYPE-1: 50/62/74/128 TYPE-2: 48/60/72/128 | |
| 4 | Minimum number of Physical servers from day 1 | TYPE-1: 4 at DC and 4 at DR | TYPE-1: 4 at DC and 4 at DR | TYPE-1: 4 at DC and 4 at DR | |

| | | | | | |
|----|--|--|--|--|--|
| | | TYPE-2: 4 at DC and 4 at DR | TYPE-2: 4 at DC and 4 at DR | TYPE-2: 4 at DC and 4 at DR | |
| 5 | Minimum total RAM per server from day 1 /phase 1 upgrade/phase 2 upgrade/Maximum upgrade | TYPE-1 : 456 GB/552 GB/696 GB/1024 GB TYPE-2 : 288GB /352 GB/448 GB//1024 GB | TYPE-1 : 456 GB/552 GB/696 GB/1024 GB TYPE-2 : 288GB /352 GB/448 GB//1024 GB | TYPE-1 : 456 GB/552 GB/696 GB/1024 GB TYPE-2 : 288GB /352 GB/448 GB//1024 GB | |
| 6 | Minimum Hard Disk Drives per server from day-1 | 4x1.2 TB 10/15K RPM SAS configured on RAID 1+0 or SAN Boot | 4x1.2 TB 10/15K RPM SAS configured on RAID 1+0 or SAN Boot | 4x1.2 TB 10/15K RPM SAS configured on RAID 1+0 or SAN Boot | |
| 7 | Operating System from day-1 | 64-bit Unix Operating System- AIX 7.2 level 0 service pack 1 or later | 64-bit Unix Operating system - Solaris 11.2 SUR 5.5 or later SUR update | 64-bit Unix Operating System - HP Unix 11.31 Sep 2014 B.11.31.1409 or later | |
| 8 | Minimum Redundant Network ports per server (Fiber ports-SR SFP+ with LC-LC cables+ 1 Gbps Port) per server from day-1 | TYPE-1: Minimum 8 no. of 10G Fibre port (4 + 4) and 2 no. of 1 Gbps Management Ports TYPE-2: Minimum 8 no. of 10G Fibre port (4 + 4) and 2 no. of 1 Gbps Management Ports | TYPE-1: Minimum 8 no. of 10G Fibre port (4 + 4) and 2 no. of 1 Gbps Management Ports TYPE-2: Minimum 8 no. of 10G Fibre port (4 + 4) and 2 no. of 1 Gbps Management Ports | TYPE-1: Minimum 8 no. of 10G Fibre port (4 + 4) and 2 no. of 1 Gbps Management Ports TYPE-2: Minimum 8 no. of 10G Fibre port (4 + 4) and 2 no. of 1 Gbps Management Ports | |
| 9 | Minimum Redundant Host Bus Adapter (HBA) per server from day-1 | Minimum 8 no. of port 16/32 Gbps HBA (4 no. 16/32 Gbps+4 no. 16/32 Gbps) | Minimum 8 no. of port 16/32 Gbps HBA (4 no. 16/32 Gbps+4 no. 16/32 Gbps) | Minimum 8 no. of port 16/32 Gbps HBA (4 no. 16/32 Gbps+4 no. 16/32 Gbps) | |
| 10 | Redundant Power Supply (RPS) and Management modules from day-1 | Server should be configured with RPS and Management modules | Server should be configured with RPS and Management modules | Server should be configured with RPS and Management modules | |

RISK/EPIC processor-based server for REPORT/UAT / Training/Migration/SIT/Development Data Base (TYPE 3 RISK/EPIC based Server)

| Sl. No. | Description | IBM | Oracle | HPE | Compliance (Yes/No) |
|---------|---|---------------------------------|----------------------------|--------------------------|---------------------|
| 1 | Model | | | | |
| 2 | Processor/Server Type & clock speed from day-1 | 3.9 - 4.0 GHz, POWER9 Processor | 5.0 GHz SPARC M8 Processor | 2.66 Ghz i6 Itanium 9760 | |

| | | | | | |
|----|--|---|---|---|--|
| 3 | Total no. of cores per Server from day 1 | Type-3 : 32 Core | Type-3 : 32 Core | Type-3 : 32 Core | |
| 4 | Minimum number of Physical servers from day 1 | Type-3: 6 at DR Type-3: 1 at DC | Type-3: 6 at DR Type-3: 1 at DC | Type-3: 6 at DR Type-3: 1 at DC | |
| 5 | Minimum total RAM per server from day 1 | Type-3: 512 GB | Type-3: 512 GB | Type-3: 512 GB | |
| 6 | Minimum Hard Disk Drives per server from day-1 | 4x1.2 TB 10/15K RPM SAS configured on RAID 1+0 or SAN Boot | 4x1.2 TB 10/15K RPM SAS configured on RAID 1+0 or SAN Boot | 4x1.2 TB 10/15K RPM SAS configured on RAID 1+0 or SAN Boot | |
| 7 | Operating System from day-1 | 64-bit Unix Operating System- AIX 7.2 level 0 service pack 1 or later | 64-bit Unix Operating system - Solaris 11.2 SUR 5.5 or later SUR update | 64-bit Unix Operating System - HP Unix 11.31 Sep 2014 B.11.31.1409 or later | |
| 8 | Minimum Redundant Network ports per server (Fiber ports- SR SFP+ with LC-LC cables+ 1 Gbps Port) per server from day-1 | Minimum 4 no. of 10G Fiber port (2 + 2) and 2 no. of 1 Gbps Ports Minimum 2 no. of 1 Gbps (1+1) Copper (RJ45) port | Minimum 4 no. of 10G Fiber port (2 + 2) and 2 no. of 1 Gbps Ports Minimum 2 no. of 1 Gbps (1+1) Copper (RJ45) port | Minimum 4 no. of 10G Fiber port (2 + 2) and 2 no. of 1 Gbps Ports Minimum 2 no. of 1 Gbps (1+1) Copper (RJ45) port | |
| 9 | Minimum Redundant Host Bus Adapter (HBA) Per server from day-1 | Minimum 4 no. of port 8/16/32 Gbps HBA (2 no. 8/16/32 Gbps+2 no. 8 /16/32 Gbps) | Minimum 4 no. of port 8/16/32 Gbps HBA (2 no. 8/16/32 Gbps+2 no. 8 /16/32 Gbps) | Minimum 4 no. of port 8/16/32 Gbps HBA (2 no. 8/16/32 Gbps+2 no. 8 /16/32 Gbps) | |
| 10 | Redundant Power Supply (RPS) from day-1 | Server should be configured with RPS | Server should be configured with RPS | Server should be configured with RPS | |

Table C : Minimum Technical Requirement of APPS (J2EE+C/C++) ,C24, Uniser, Web, MIS & CSIS APP (Production) on x86 (Linux RHEL) platform

DC site:

39 no of Enterprise Class Blade server with enclosure/chassis level redundancy for deployment of

- (a) 8 nos. of C/C++ App server in Active -Active & Load balance mode
- (b) 4 nos. of Uniser Server in Active -Active & Load balance mode
- (c) 2 nos. of C24 in Active -Active & Load balance mode
- (d) 6 nos. of J2EE in Active -Active & Load balance mode
- (e) 4 nos. of HTTP in Active -Active & Load balance mode

- (f) 2 nos. of CSIS APP in Active -Active & Load balance mode
- (g) 2 nos. of MIS APP server in Active -Active & Load balance mode
- (h) 2 nos. of additional Finacle Report Application + Web
- (i) 2 no. FEBA & DEH DB in 2 Node RAC
- (j) 2 no. FAS DB in 2 Node RAC
- (k) 3 no. of FEBA + DEH Application Server in Active -Active & Load balance mode
- (l) 2 no. of FAS application server in Active-Active & Load balancer node

All 39 no. of Enterprise Class Blade server for DC location should be deployed in such as way that all above mentioned application and DBs should have enclosure/chassis level redundancy/failover.

DR site:

All 39 no of Enterprise Class Blade server with enclosure/chassis level redundancy for deployment of

- (a) 8 nos. of C/C++ App server in Active -Active & Load balance mode
- (b) 4 nos. of Uniser Server in Active -Active & Load balance mode
- (c) 2 nos. of C24 in Active -Active & Load balance mode
- (d) 6 nos. of J2EE in Active -Active & Load balance mode
- (e) 4 nos. of HTTP in Active -Active & Load balance mode
- (f) 2 nos. of CSIS APP in Active -Active & Load balance mode
- (g) 2 nos. of MIS APP server in Active -Active & Load balance mode
- (h) 2 nos. of additional Finacle Report Application + Web
- (i) 2 no. FEBA & DEH DB in 2 Node RAC
- (j) 2 no. FAS DB in 2 Node RAC
- (k) 3 no. of FEBA + DEH Application Server in Active -Active & Load balance mode
- (l) 2 no. of FAS application server in Active-Active & Load balancer node

All 39 no. of Enterprise Class Blade server for DR location should be deployed in such as way that all above mentioned application and DBs should have enclosure/chassis level redundancy/failover.

All servers should be supplied with standard server Rack along with required redundant PDUs

| Sl.No | Description | APP(C/C++), MIS APP , CSIS APP , Report APP Server (TYPE-1 x86) | J2EE APP and Uniser APP server (TYPE-2 x86) | C24 APP (TYPE-3 x86) | HTTP Web (TYPE-4 x86) | FEBA DB & APP (TYPE-5 x86) | Compliance (Yes/No) |
|-------|-------------------------------------|---|---|---|---|---|---------------------|
| | Make: | HPE/Dell/ Cisco | HPE/Dell/ Cisco | HPE/Dell/ Cisco | HPE/Dell/ Cisco | HPE/Dell/ Cisco | |
| 1 | Make & Model | | | | | | |
| 2 | Processor/Server Type & clock speed | Intel Xeon Gold 6xxx CPU x86-64 bit @ 3.1 GHz or higher with HT, Turbo Boosting | Intel Xeon Gold 6xxx CPU x86-64 bit @ 3.1 GHz or higher with HT, Turbo Boosting | Intel Xeon Gold 6xxx CPU x86-64 bit @ 3.1 GHz or higher with HT, Turbo Boosting | Intel Xeon Gold 6xxx CPU x86-64 bit @ 3.1 GHz or higher with HT, Turbo Boosting | Intel Xeon Gold 6xxx CPU x86-64 bit @ 3.1 GHz or higher with HT, Turbo Boosting | |
| 3 | Minimum total no. | 42 | 30 | 20 | 10 | 48 | |

| | | | | | | | |
|---|--|---|---|---|---|---|--|
| | of cores per Server from day 1/ minimum cores upgrade capability per server | | | | | | |
| 4 | Minimum number of Physical servers from day-1 | 14 at DC 14 at DR | 10 at DC 10 at DR | 2 at DC 2 at DR | 4 at DC 4 at DR | 9 at DC 9 at DR | |
| 5 | Minimum total RAM per server from day 1 / minimum RAM upgrade capability per server | 448 GB | 256 GB | 160 GB | 64 GB | 384 GB | |
| 6 | Minimum Hard Disk Drives per server from day-1 | 2x1.2 TB 10K/15K RPM SAS configured on RAID 1+0 or SAN Boot | 2x1.2 TB 10K/15K RPM SAS configured on RAID 1+0 or SAN Boot | 2x1.2 TB 10K/15K RPM SAS configured on RAID 1+0 or SAN Boot | 2x1.2 TB 10K/15K RPM SAS configured on RAID 1+0 or SAN Boot | 2x1.2 TB 10K/15K RPM SAS configured on RAID 1+0 or SAN Boot | |
| 7 | Operating System from day-1 | Red Hat Enterprise Linux (RHEL) Server 7.5 (64 bits on intel) | Red Hat Enterprise Linux (RHEL) Server 7.5 (64 bits on intel) | Red Hat Enterprise Linux (RHEL) Server 7.5 (64 bits on intel) | Red Hat Enterprise Linux (RHEL) Server 7.5 (64 bit on intel) | Red Hat Enterprise Linux (RHEL) Server 7.5 (64 bit on intel) | |
| 8 | Minimum Redundant Network ports per server (Fiber ports- SR SFP+ with LC-LC cables) per server from day-1 | 2 no. of 10G Fiber port (1 +1) Minimum 2 no. of 1 Gbps (1+1) Copper Ethernet Port RJ45 | 2 no. of 10G Fiber port (1 +1) Minimum 2 no. of 1 Gbps (1+1) Copper Ethernet Port RJ45 | 2 no. of 10G Fiber port (1 +1) Minimum 2 no. of 1 Gbps (1+1) Copper Ethernet Port RJ45 | 2 no. of 10G Fiber port (1 +1) Minimum 2 no. of 1 Gbps (1+1) Copper Ethernet Port RJ45 | 2 no. of 10G Fiber port (1 +1) Minimum 2 no. of 1 Gbps (1+1) Copper Ethernet Port RJ45 | |
| 9 | Minimum Redundant Host Bus Adapter (HBA) per server from day-1 for storage space for application/DB installation | 2 no. of port 16 Gbps HBA (1 no. 16 Gbps+1 no. 16 Gbps) | 2 no. of port 16 Gbps HBA (1 no. 16 Gbps+1 no. 16 Gbps) | 2 no. of port 16 Gbps HBA (1 no. 16 Gbps+1 no. 16 Gbps) | 2 no. of port 16 Gbps HBA (1 no. 16 Gbps+1 no. 16 Gbps) | 2 no. of port 16 Gbps HBA (1 no. 16 Gbps+1 no. 16 Gbps) | |

Table D : Minimum Technical Requirement of FEAB WE(Production) and UAT, Migration, training , SIT , Development (Non-Production)

DC & DR each: 3 no. of Enterprise Class Rack server Type-6 for deployment of FEAB WE(Production)
 DC & DR each: 2 no. of Enterprise Class Rack server Type-7 for deployment of HA Proxy (Production)
 DR: 5 no. of Enterprise Class Rack Server Type-6 for deployment of Fin Assure
 DR: 9 no. of Enterprise Class Rack Server Type-6 for deployment of Finacle 10.x UAT APP(C/C++), J2EE and Web, training, Migration and FEBA Web
 DR: 3 no. of Enterprise Class Rack Server Type-7 for deployment Finacle 10.x SIT/Development and FEBA+DEH+FAS UAT application and DB.

All servers should be supplied with OEM Rack along with required redundant PDUs

| Sl. No. | Description | UAT APP(C/C++ & J2EE) and WEB J2EE APP and Uniser APP server C24 APP HTTP Web (Non-Production) FEAB WE(Production) | Compliance (Yes/No) |
|---------|--|--|---------------------|
| 1 | Model | | |
| 2 | Processor/Server Type & clock speed | Intel Gold process with minimum 3.1 GHz or higher | |
| 3 | Minimum total no. of cores per Server from day 1 | TYPE-6 x86: 12 Core TYPE-7 x86:20 Core | |
| 4 | Minimum number of Physical servers | 17 no of TYPE-6 x86 at DR 3 no of TYPE-6 x86 at DC 2 No. TYPE-7 x86 at DC 5 no. TYPE-7 x86 at DR | |
| 5 | Minimum total RAM per server from day 1 | Type 6 Server :128 GB RAM Type 7 server:240 GB RAM | |
| 6 | Minimum Hard Disk Drives per server | 2x1.2 TB 10/15K RPM SAS configured on RAID 1+0 or SAN Boot | |
| 7 | Operating System | Red Hat Enterprise Linux (RHEL) Server 7.7 (64 bits on intel) | |
| 8 | Minimum Redundant Network ports per server (Fibre ports- SR SFP+ with LC-LC cables) per server | 4 no. of 10G Fiber port (2 +2) 2 no. of 1 G Copper Ethernet Port RJ45 (1+1) | |
| 9 | Minimum Redundant Host Bus Adapter (HBA) per server | 2 no. of port 16 Gbps HBA (1 no. 16 Gbps+1 no. 16 Gbps) | |
| 10 | Redundant Power Supply (RPS) | Server should be configured with RPS | |

Table E: Minimum additional technical requirement for servers mentioned at Table B (1. Production DB, CSIS DB and MIS/REPORT DB)

| Sl.No. | Technical Requirement | Compliance Yes/No | Remarks |
|--------|---|-------------------|---------|
| 1 | The server proposed as mentioned in table B (Production DB) shall be configured with dedicated for hosting production DBs DC & DR Each side 4 no. Physical Servers will be used for 4-Node RAC for CBS DB in and remaining 2 no. Physical Servers used for hosting 2 node CSIS DB (Active-Passive) and 2 node MIS DB (Active-Passive). CSIS and Report DB should be run in hard/virtual partition. All hard/virtual partition nodes should be host in physical/logically separated | | |

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| | partition having dedicated CPU, RAM, I/Os | | |
| 2 | The server shall have capability to boot from SAN for all physical/virtual machines. Dedicated (used solely for boot function) redundant FC ports across two physical adapters must be offered separately. | | |
| 3 | Each Partition shall support 64 Bit RISC/EPIC Processor Based System with latest generation processor. The server should be OEM certified to run one of the following operating systems: OEM UNIX (HP-UX, IBM AIX, Oracle Sun Solaris) as mentioned Table B. Each partition should be able to host different operating systems & different versions/patch levels of the operating system. Each partition shall have aligned to it the necessary resources (processor, memory and IO) required to host its workload. Software faults on one partition should not impact other partitions. An error/fault in one partition should not bring the entire system or other partitions down. | | |
| 4 | The server shall have scalability with support for minimum 24 Nos of PCIe Slots. All PCIe adapters used in the solution shall be hot swappable/pluggable. Integrated controllers on the motherboard may not be used except for server management, attachment of peripherals such as keyboard, mouse, video, etc. | | |
| 5 | The server shall be configured with below type of Adapters <ul style="list-style-type: none"> • 16 Gbps Fibre Channel adapters for SAN access (disk & tape) • 10 Gigabit Short Range Fiber Ethernet adapters for user/application communication Functional (Ethernet & Fibre Channel) redundancy at an adapter level should be provided in each IO partition. | | |
| 6 | Highest clock speed and largest cache CPU available from the OEM should be offered in each server. | | |
| 7 | All memory should be DDR3/DDR4 based or latest type at a minimum throughput of 1,600MHz; if lower clocked memory is offered or the memory (DIMMS) population runs the memory at a lower clock then 50% additional memory should be offered. All memory should be registered & should have advanced memory protection such as ECC etc. | | |
| 8 | All servers shall be provided with the capability of being partitioned; each partition shall have its own operating system instance, host name and IP address. | | |
| 9 | The software/firmware/hypervisor name and the partitioning technology being used to be expressively mentioned. | | |
| 10 | The server should Support partitioning to create multiple server environments within the physical server. The Software Licenses/ Hardware features necessary for creating the required number of partitions on the proposed server to be provided | | |
| 11 | Each partition shall be able to run same or different versions of OS kernel, patch levels, etc. independently. Any configuration change in one partition shall not affect any other partition. Software faults on one partition should not impact other partitions. An error/fault in one partition should not bring the entire system or other partitions down | | |
| 12 | Partitions should have security isolation from one another. Shared I/O if offered should also have security isolation. | | |
| 13 | System shall be capable of creating partitions with dedicated or virtual resources (processor, disk & media, and I/O) with separate operating system instances or within a single operating system | | |

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| | instance. | | |
| 14 | Processor resources allocated to partitions shall be capable of being allocated as whole or partial processors. | | |
| 15 | The hypervisor shall be capable of executing policies to administer processor and memory resources including Dynamically & automatically allocating additional physical memory temporarily to partitions with heavy paging | | |
| 16 | Each partition shall have the capability to start-up and shutdown independently without affecting any other partition on the same server. | | |
| 17 | The Server should be configured with latest generation Unix 64 bit operating system with all the current patches and bug-fixes including software features such as Volume Management, OS Clustering, DB integration with Cluster agents., etc. | | |
| 18 | The OS of each partition shall be upgradeable separately and independently without affecting the other partitions. | | |
| 19 | The server should be configured with necessary and all Virtualization software to create partitions and manage these partitions | | |
| 20 | Necessary virtualization, cluster configuration and management software are to be provided with unlimited users. | | |
| 21 | Operating system offered should include the following features: Necessary Clustering for OS and High availability for Oracle RAC Nodes, Workload management, Patch management system, Dynamic multipath I/O for fibre channel and SCSI I/O paths for disk and tape devices, Partitioning functionality to allow the creation of multiple partitions within the server, Volume management to allow the creation, expansion and shrinking of volumes and dynamically mirrored volumes , Journalized file systems with an encryption option and snapshotting capability to create snapshots without unmounting or quiescent the file system | | |
| 22 | The operating system should be able to identify failures and automatically reconfigure/delineate resources that have failed, without bring down the entire system. | | |
| 23 | The Operating systems quoted should be the latest Enterprise Edition of the Operating system, with unlimited users for the Operating system | | |
| 24 | Should provide alerts on the component failures within the servers | | |
| 25 | Proposed Each server must have redundant architecture – Internal Storage Disks, HBAs, Network Card, Interface Cards (I/O cards), Power Supply and Cooling FANs etc. | | |
| 26 | Each Server Should have at least the below mentioned features for Reliability, Availability, and Serviceability: Extended ECC Memory, Redundant Instruction Retry, Cache parity protection, Internal Data protection | | |
| 27 | All IO Cards / Ports used in the solution shall be hot swappable/hot pluggable/fixed base. | | |
| 25 | High end Enterprise Class Rack Servers with no single point of failure should be quoted. Only mentioned Server Model should be quoted. The server should be quoted with OEM rack. | | |
| 26 | Integrated controllers on the motherboard may not be used except for server management, attachment of peripherals such as keyboard, mouse, video, etc. Any cores Required to achieve | | |

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| | Virtualization/Portioning should be quoted extra/addition to the requirement mentioned | | |
| 27 | OS-level clustering software to be from OEM vendor. All necessary software and hardware components for automatic high availability fail over to be provided. Redundant heartbeats shall be supported using multiple channels (Ethernet, Fibre Channel, etc.) Operating system / Clustering software should provide commands and programming APIs to create a cluster with a group of servers / partitions that provides monitoring and event management. This includes supporting common device naming for storage devices across the cluster. Automated failover with automatic take-back or manual take-back should be configurable in the cluster setup. Cluster-wide update commands should be available to propagate cluster changes to all nodes in the cluster. | | |
| 28 | The operating system should be licensed for unlimited user license The virtualization software shall be licensed for the entire server. The required cluster licenses for solution should be offered including all available agents. The licenses required should cover all cores / VMs that are clustered. Additionally, it should be possible to license additional cores / VMs as required (temporary / short term use); if this is not possible then the entire server (all cores / VMs) needs to be licensed. The security & compliance tools shall be licensed for the complete server including the maximum number of partitions that can be theoretically created on the server. | | |
| 29 | All Servers should have redundant power supply with automatic takeover and All the OS should be enterprise version | | |
| 30 | The storage system must support IPv4 & IPv6. | | |
| 31 | The bidder has to give certificate of assurance for supply and upgraded of proposed server over a period of five (5) year and support for period of seven (7) year shall be submitted on OEM letter head duly signed by authorized signatory | | |
| 32 | Bidder should mention maximum rated power (watts) and cooling (BTU/hr) and rack space requirement for the server. The server shall come with the following energy management features: <ul style="list-style-type: none"> ● Continuous collection of real-time server power consumption and ambient temperature ● Enable/disable power saving mode(s) to policy manage power & thermal usage of the server by reducing processor frequencies and limiting processor utilization ● Enforce a user-defined maximum power (watts) utilization by the server ● Adjust fan speed in response to real-time temperatures of the server components. | | |
| 33 | The system should be quoted with 5 years with 24 x 7 and 4 HR CTR Support by the OEM. (3 years Upfront warranty and AMC for year 4 and Year 5) The operating system, any system software's, management tools and security tools should also be quoted with 3 years and ATS for year 4 and Year 5 support 24x7 support All the hardware should be quoted with 99.99% SLA uptime (calculated monthly) with 4 hours response time. Proactive services like Patches & fixes for the OS shall be provided free of cost during contract period for all the systems quoted. | | |

| | <p>The servers will be commissioned by the OEM certified engineers only.</p> <p>The supplied hardware should be covered under Data Center mission critical or equivalent support.</p> <p>The on-site support will be by the OEM certified engineers only.</p> | | |
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| <p align="center">Minimum additional technical requirement for servers mentioned at Table B (2. REPORT/UAT/MIGRATION/Development DB)</p> | | | |
| Sl.No. | Technical Requirement | Compliance Yes/No | Remarks |
| 1 | 7 no. of Physical Servers for hosting of Non-Production DBs like REPORT, UAT, Training, Development and Migration DB. All non-production DB node should be hosted in physical/logical partitioning. All hard/virtual partition nodes should be host in physical/logically separated partition having dedicated CPU, RAM, Motherboard, I/Os. UAT DB will be configure as 2 node RAC. | | |
| 2 | The server shall have capability to boot from SAN for all physical/virtual machines Dedicated (used solely for boot function) redundant FC ports across two physical adapters must be offered separately. | | |
| 3 | Each Partition shall support 64 Bit RISC/EPIC Processor Based System with latest generation processor. The server should be OEM certified to run one of the following operating systems: OEM UNIX (HP-UX, IBM AIX, Oracle Sun Solaris) as mentioned Table B. Each partition should be able to host different operating systems & different versions/patch levels of the operating system. Each partition shall have aligned to it the necessary resources (processor, memory and IO) required to host its workload. Software faults on one partition should not impact other partitions. An error/fault in one partition should not bring the entire system or other partitions down. | | |
| 4 | The server shall support minimum 5 Nos of PCIe Slots. All PCIe adapters used in the solution shall be hot swappable/pluggable/fixed base. | | |
| 5 | <p>The server shall be configured with below type of Adapters</p> <ul style="list-style-type: none"> • 8/16/32 Gbps Fibre Channel adapters for SAN access (disk & tape) • 10 Gigabit Short Range Fiber Ethernet adapters for user/application communication Functional (Ethernet & Fibre Channel) redundancy at an adapter level should be provided in each IO partition. | | |
| 6 | Highest clock speed and largest cache CPU available from the OEM should be offered in each server. | | |
| 7 | All memory should be DDR3/DDR4 based or latest type at a minimum throughput of 1,600MHz; if lower clocked memory is offered or the memory (DIMMS) population runs the memory at a lower clock then 50% additional memory should be offered. All memory should be registered & should have advanced memory protection such as ECC etc. | | |
| 8 | All servers shall be provided with the capability of being partitioned; each partition shall have its own operating system instance, host name and IP address. | | |
| 9 | The software/firmware/hypervisor name and the partitioning technology being used to be expressively mentioned. | | |

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| 10 | The server should Support partitioning to create multiple server environments within the physical server. The Software Licenses/ Hardware features necessary for creating the required number of partitions on the proposed server to be provided | | |
| 11 | Each partition shall be able to run same or different versions of OS kernel, patch levels, etc. independently. Any configuration change in one partition shall not affect any other partition. Software faults on one partition should not impact other partitions. An error/fault in one partition should not bring the entire system or other partitions down | | |
| 12 | Partitions should have security isolation from one another. Shared I/O if offered should also have security isolation. | | |
| 13 | System shall be capable of creating partitions with dedicated or virtual resources (processor, disk & media, and I/O) with separate operating system instances or within a single operating system instance. | | |
| 14 | Processor resources allocated to partitions shall be capable of being allocated as whole or partial processors. | | |
| 15 | The hypervisor shall be capable of executing policies to administer processor and memory resources including Dynamically & automatically allocating additional physical memory temporarily to partitions with heavy paging | | |
| 16 | Each partition shall have the capability to start-up and shutdown independently without affecting any other partition on the same server. | | |
| 17 | The Server should be configured with latest generation Unix 64 bit operating system with all the current patches and bug-fixes including software features such as Volume Management, OS Clustering, DB integration with Cluster agents., etc. | | |
| 18 | The OS of each partition shall be upgradeable separately and independently without affecting the other partitions. | | |
| 19 | The server should be configured with necessary and all Virtualization software to create partitions and manage these partitions | | |
| 20 | Necessary virtualization, cluster configuration and management software are to be provided with unlimited users. | | |
| 21 | Operating system offered should include the following features: Necessary Clustering for OS and High availability for Oracle RAC Nodes, Workload management, Patch management system, Dynamic multipath I/O for fibre channel and SCSI I/O paths for disk and tape devices, Partitioning functionality to allow the creation of multiple partitions within the server, Volume management to allow the creation, expansion and shrinking of volumes and dynamically mirrored volumes , Journalized file systems with an encryption option and snapshotting capability to create snapshots without unmounting or quiescent the file system | | |
| 22 | The operating system should be able to identify failures and automatically reconfigure/delineate resources that have failed, without bring down the entire system. | | |
| 23 | The Operating systems quoted should be the latest Enterprise Edition of the Operating system, with unlimited users for the Operating system | | |
| 24 | Should provide alerts on the component failures within the servers | | |

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| 25 | Proposed Each server must have redundant architecture – Internal Storage Disks, HBAs, Network Card, Interface Cards (I/O cards), Power Supply and Cooling FANs etc. | | |
| 26 | Each Server Should have at least the below mentioned features for Reliability, Availability, and Serviceability: Extended ECC Memory, Redundant Instruction Retry, Cache parity protection, Internal Data protection | | |
| 27 | All IO Cards / Ports used in the solution shall be hot swappable/hot pluggable/fixed base. | | |
| 25 | High end Enterprise Class Rack Servers with no single point of failure should be quoted. Only mentioned Server Model should be quoted. The server should be quoted with OEM rack. | | |
| 26 | Integrated controllers on the motherboard may not be used except for server management, attachment of peripherals such as keyboard, mouse, video, etc. Any cores Required to achive Virtualization/Partitioning should be quoted extra/addition to the requirement mentioned | | |
| 27 | OS-level clustering software to be from OEM vendor. All necessary software and hardware components for automatic high availability fail over to be provided. Redundant heartbeats shall be supported using multiple channels (Ethernet, Fibre Channel, etc.) Operating system / Clustering software should provide commands and programming APIs to create a cluster with a group of servers / partitions that provides monitoring and event management. This includes supporting common device naming for storage devices across the cluster. Automated failover with automatic take-back or manual take-back should be configurable in the cluster setup. Cluster-wide update commands should be available to propagate cluster changes to all nodes in the cluster. | | |
| 28 | The operating system should be licensed for unlimited user license The virtualization software shall be licensed for the entire server. The required cluster licenses for solution should be offered including all available agents. The licenses required should cover all cores / VMs that are clustered. Additionally, it should be possible to license additional cores / VMs as required (temporary / short term use); if this is not possible then the entire server (all cores / VMs) needs to be licensed. The security & compliance tools shall be licensed for the complete server including the maximum number of partitions that can be theoretically created on the server. | | |
| 29 | All Servers should redundant power supply with automatic takeover and All the OS should be enterprise version | | |
| 30 | The storage system must support IPv4 & IPv6. | | |
| 31 | The bidder has to give certificate of assurance for supply and upgraded of proposed server over a period of five (5) year and support for period of seven (7) year shall be submitted on OEM letter head duly signed by authorized signatory | | |
| 32 | Bidder should mention maximum rated power (watts) and cooling (BTU/hr) and rack space requirement for the server. The server shall come with the following energy management features: <ul style="list-style-type: none"> Continuous collection of real-time server power consumption and ambient temperature | | |

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| | <ul style="list-style-type: none"> • Enable/disable power saving mode(s) to policy manage power & thermal usage of the server by reducing processor frequencies and limiting processor utilization • Enforce a user-defined maximum power (watts) utilization by the server • Adjust fan speed in response to real-time temperatures of the server components. | | |
| 33 | <p>The system should be quoted with 5years with 24 x 7 and 4 HR CTR Support by the OEM. (3 years Upfront warranty and AMC for year 4 and Year 5)</p> <p>The operating system, any system software's, management tools and security tools should also be quoted with 3 years and ATS for year 4 and Year 5 support 24x7 support</p> <p>All the hardware should be quoted with 99.99 % SLA uptime (calculated monthly) with 4 hours response time.</p> <p>Proactive services like Patches & fixes for the OS shall be provided free of cost during contract period for all the systems quoted.</p> <p>The servers will be commissioned by the OEM certified engineers only.</p> <p>The supplied hardware should be covered under Data Center mission critical or equivalent support.</p> <p>The on-site support will be by the OEM certified engineers only.</p> | | |

| SL.No | Table F: Required Minimum Technical Requirement - CBS APP WEB Server | Compliance | |
|---------------------------------|---|-------------------|--|
| | Table C | Yes/No | |
| Blade Enclosures/Chassis | | | |
| 1 | Make: HPE/Dell/Cisco Model :..... | | |
| 2 | Solution to house the required number of full/half/quarter height/ width blades in the same enclosure. Industry standard suitable for housing in Standard Server Racks. The blade enclosure should offer higher server density per square- foot when compared to 1U Rack servers. The offered blade chassis shall be offered with Full/half/quarter height/ width blades. | | |
| 3 | All Apps & Webs Server used for Finacle 10.x production environment should be deployed with encloser level redundancy. | | |
| 4 | Same enclosure should support multiple generations of Intel processors-based blades | | |
| 5 | Redundancy shall be offered & configured at the management layer with KVM functionality. | | |
| 6 | Should provide a highly reliable and high-performance mid-plane/back-plane/back-plane less design in the blade enclosure. Should provide detailed technical information. | | |
| 7 | Should be able to accommodate the full/half/quarter height/width blade servers of specifications mentioned in the proposed blade enclosures. The proposals must offer the most dense packaging possible for the blade servers in the enclosure and maximum headroom for future expansion in the offered enclosures. | | |
| 8 | Support simultaneous remote access for different servers in the enclosure. | | |
| 9 | Should support simultaneous flows of Ethernet and FC traffic over the interconnect fabrics offering Hot Pluggability & Redundancy as a feature | | |
| 10 | The blade enclosure/chassis should be configured with minimum 16 X 10Gbps SR SFP & 16x16Gbps FC Uplink SFP Ports for Datacenter | | |

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| | connectivity | | |
| 11 | The enclosure shall support FC/FCOE/Ethernet interconnect modules with redundancy. In case of the interconnect module is external to enclosure, each enclosure shall have dedicated interconnect modules in HA. | | |
| 12 | Solution should support virtualizing network and storage connections by offering virtual MAC and WWN addresses OR provide discrete I/O to each Blade server. | | |
| 13 | Redundancy shall be offered at the Power Supply level. In case of failure of min 1 Power supply all the blades in the chassis shall not shut down. | | |
| 14 | Each blade enclosure should have a cooling subsystem consisting of redundant hot pluggable fans or blowers enabled with technologies for improved power consumption and acoustics | | |
| 15 | Must provide a remote management functionality to operate the server in both in-band / out-of-band. Must be part of the server without the need to install any additional hardware or software. | | |
| 16 | Must have a real time Virtual KVM functionality and be able to perform a remote Power sequence. Must provide both Java & Java-free browsing options. | | |
| 17 | Must have the ability to map the remote media to the server and ability to transfer files from the user's desktop/laptop folders to the remote server with only the network connectivity. | | |
| 18 | Must be able to show the actual power usage and actual thermal measurement data of the servers. | | |
| 19 | Vendors must submit supporting documents stating RoHS compliance. | | |
| 20 | The bidder has to give certificate of assurance for supply and upgraded of proposed server over a period of five (5) year and support for period of seven (7) year shall be submitted on OEM letter head duly signed by authorized signatory | | |
| 21 | Bidder should mention maximum rated power (watts) and cooling (BTU/hr) and rack space requirement for the server. | | |
| 22 | <p>The system should be quoted with 5years with 24 x 7 and 4 HR CTR Support by the OEM. (3 years Upfront warranty and AMC for year 4 and Year 5)</p> <p>The operating system, any system software's, management tools and security tools should also be quoted with 3 years and ATS for year 4 and Year 5 support 24x7 support</p> <p>All the hardware should be quoted with 99.99% SLA uptime (calculated monthly) with 4 hours response time.</p> <p>Proactive services like Patches & fixes for the OS shall be provided free of cost during contract period for all the systems quoted.</p> <p>The servers will be commissioned by the OEM certified engineers only.</p> <p>The supplied hardware should be covered under Data Center mission critical or equivalent support.</p> <p>The on-site support will be by the OEM certified engineers only.</p> | | |
| Minimum Blade Server Technical Requirements | | | |
| Make: HPE/Dell/Cisco | | | |
| Model :..... | | | |
| 1 | Intel Xeon Gold CPU x86-64 bit with 3.1 Ghz or higher with HT, Turbo Boosting. | | |
| 2 | N+1 Physical server deployment of required sizing for each APP, WEB, J2EE Layers as mentioned at SOW | | |
| 3 | Server shall support Advanced ECC, Memory Mirroring/Online spare/ | | |

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| | Lockstep Mode | | |
| 4 | Support for Integrated SAS Raid Controller with RAID 0, 1 with 512MB of Flash backed write cache onboard | | |
| 5 | Min 2 * PCI Slots integrated | | |
| 6 | ACPI 2.0 USB 2.0 Support IPMI 2.0 Secure Digital 2.0 TPM 1.2 Support IEEE (specific IEEE standards depending on Ethernet adapter card(s) installed) Advanced Encryption Standard (AES) Triple Data Encryption Standard (3DES) SNMP SSL 2.0 DMTF Systems Management Architecture for Server Hardware Command Line Protocol (SMASH CLP) PCIe 3.0 | | |
| 7 | Shall support latest versions of Microsoft Windows Server Linux (Redhat / Suse / Etc) | | |
| 8 | Essential tools, drivers, agents to setup, deploy and maintain the server should be embedded inside the server. There should be a built -in Update manager that can update firmware of system by connecting online. | | |
| 9 | The proposed enclosure for virtualization shall have capability for template based provisioning of compute, storage and network. | | |
| 11 | Server should support agentless management using the out-of-band remote management port. | | |
| 12 | The server should support Active Health System which monitors and records changes in the server hardware and system configuration. It assists in diagnosing problems and delivering rapid resolution when system failures occur. | | |
| 13 | Should help provide proactive notification of actual or impending component failure alerts on critical components like CPU, Memory and HDD. Should support automatic event handling that allows configuring policies to notify failures via e-mail, pager, or SMS gateway or automatic execution of scripts. | | |
| 14 | Should be able to perform comprehensive system data collection and enable users to quickly produce detailed inventory reports for managed devices. Should support the reports to be saved in HTML, CSV or XML format. | | |
| 15 | The bidder has to give certificate of assurance for supply and upgraded of proposed server over a period of five (5) year and support for period of seven (7) year shall be submitted on OEM letter head duly signed by authorized signatory | | |
| 16 | Bidder should mention maximum rated power (watts) and cooling (BTU/hr) and rack space requirement for the server. | | |
| 17 | The system should be quoted with 5years with 24 x 7 and 4 HR CTR Support by the OEM. (3 years Upfront warranty and AMC for year 4 and Year 5) The operating system, any system software's, management tools and security tools should also be quoted with 3 years and ATS for year 4 and Year 5 support 24x7 support All the hardware should be quoted with 99.9% SLA uptime (calculated | | |

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| | monthly) with 4 hours response time. Proactive services like Patches & fixes for the OS shall be provided free of cost during contract period for all the systems quoted. The servers will be commissioned by the OEM certified engineers only. The supplied hardware should be covered under Data Center mission critical or equivalent support. The on-site support will be by the OEM certified engineers only. | | |
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Minimum Rack Server Technical Requirements

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| Make: HPE/Dell/Cisco Model : | | | |
| 1 | Intel Xeon Gold CPU x86-64 bit with 3.1 Ghz or higher with HT, Turbo Boosting., 4 Memory channel, Virtualization support | | |
| 2 | Latest Intel Chipset supporting above Processor | | |
| 3 | DDR4 Memory module, should be scalable up to 512 GB memory per server with minimum 2400 MT/s Memory modules | | |
| 4 | Should have minimum 3 PCI-e (Express) slots in which minimum 2 x PCI-e 16X | | |
| 5 | Graphics should be Integrated with chipset | | |
| 6 | Minimum 2 x 1.2 SFF 15K RPM SAS HDD / SSD Hot Pluggable Drive. The server should support SAS, SATA and SSD hard disk drives and must have an internal slot for SD Card/Micro SD Card/ USB Flash Drive which supports booting hypervisors. The Server should have support for Boot from LAN. | | |
| 7 | Should Support Microsoft Windows Server, Redhat Enterprise Linux, SuSE Linux Enterprise Server, Market leading Bare metal Virtualization Hypervisor. | | |
| 8 | HDD controller SAS/SATA/SSD Raid controller capable of providing RAID 0, 1, 5, 10 configurations. | | |
| 9 | Should have minimum 4 x 10GbE Fibre ports with module | | |
| 10 | Should have min 2 x USB 2.0, 1 x Management port | | |
| 11 | Should have Dual, Hot-plug, Redundant Power Supply | | |
| 12 | Should have Redundant Hot Pluggable cooling Fans. | | |
| 13 | should provide notification of critical component failure alerts like CPU, Memory, HDD, Raid controller etc. Should support Remote management features, Should be able to perform comprehensive system data collection and enable users to quickly produce detailed inventory reports for managed devices | | |
| 14 | should have embedded Update Provisioning Essential tools, drivers, agents to setup, deploy and maintain the server. There should be a built - in Update manager that can update firmware of system by connecting online. | | |
| 15 | Should have minimum 2 * 16Gbps dual port PCI-E FC HBA | | |
| 16 | Shall support latest versions of Microsoft Windows Server Linux (Redhat / Suse / Etc) | | |
| 17 | The bidder has to give certificate of assurance for supply and upgraded of proposed server over a period of five (5) year and support for period of seven (7) year shall be submitted on OEM letter head duly signed by authorized signatory | | |
| 18 | Bidder should mention maximum rated power (watts) and cooling (BTU/hr) and rack space requirement for the server. | | |
| 19 | The system should be quoted with 5years with 24 x 7 and 4 HR CTR | | |

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| | <p>Support by the OEM. (3 years Upfront warranty and AMC for year 4 and Year 5)</p> <p>The operating system, any system software's, management tools and security tools should also be quoted with 3 years and ATS for year 4 and Year 5 support 24x7 support.</p> <p>All the hardware should be quoted with 99.99% SLA uptime (calculated monthly) with 4 hours response time.</p> <p>Proactive services like Patches & fixes for the OS shall be provided free of cost during contract period for all the systems quoted.</p> <p>The servers will be commissioned by the OEM certified engineers only.</p> <p>The supplied hardware should be covered under Data Center mission critical or equivalent support.</p> <p>The on-site support will be by the OEM certified engineers only.</p> | | |
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Table G: Minimum technical requirement for Enterprise class Storage at DC, DR and NDR

| Sl.No. | Technical Requirement | Compliance Yes/No | Remarks |
|--------|---|-------------------|---------|
| 1 | Make : IBM or HPE or Oracle or NetApp or Hitachi or EMC-Dell Model : | | |
| 2 | The Storage System must be an enterprise class Storage System and shall support no single point of failure features, such as Non- disruptive component replacement and non-disruptive replacement of Interfaces, Disk controllers, Disk drives, Cache memory cards, Micro-code upgrade, Power supplies, Battery systems, Fan subsystems, FC controller and ports, etc. | | |
| 3 | Storage should be proposed with at-least dual redundant, hot swappable controllers for high-availability, load balancing and redundant modes of operation. | | |
| 4 | Storage system shall be configured with adequate number of Backend FC/SAS Disk ports (towards disks) so as to meet the required performance specifications. | | |
| 5 | Minimum 2048 GB DRAM to accommodate cache pages and Data in cache should be protected against unexpected power failures for minimum 72 hours of time. | | |
| 6 | The Storage System should have minimum of 2048 GB of Cache and should be scalable to 4 TB Cache for data and control operation. The write cache must be mirrored / protected to avoid any data loss in case of a failure | | |
| 8 | <p>DC Site: 350 TB All Flash usable capacity in RAID 6</p> <p>DR Site: 600 TB All Flash usable capacity in RAID 6</p> <p>NDR Site: 10 TB Flash usable capacity in RAID 6</p> <p>In all three sites mentioned above, effective usable capacity should <u>NOT</u> include effect of compression, de-duplication or thin provisioning for storage capacity and its scalability. The usable capacity should be clearly available.</p> | | |
| 9 | <p>Minimum 5,00,000 IOPS at Block size - 8 KB and 70:30 Read Write for Storage DC & DR</p> <p>Minimum 2,00,000 IOPS at Block size - 8 KB and 70:30 Read Write for Storage NDR</p> | | |

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| 10 | Storage should have features like Snapshot, Clone, Temper proof/read only copy, and multisite replication etc. Storage providing enterprise class data availability, supporting zero data loss, 3-way DR replication | | |
| 11 | GUI based management software for configuration, historical performance monitoring and storage replication, data at rest encryption | | |
| 12 | Minimum 32 X 16 Gbps FC Ports (16+16) . If required bidder needs provision extra port to future provisioning during contract period. | | |
| 13 | Storage should have minimum 2 PB Usable space in RAID 6 with 8,00,000 IOPS for DC & DR Storage. Storage should have minimum 100 TB Usable space in RAID 6 with 5,00,000 IOPS for NDR Storage. | | |
| 14 | Industry Standard RAID array supporting minimum 5 and 6 levels. It should support a mix and match of RAID levels behind a pair of controllers. The storage array should allow online expansion of existing RAID Groups / SSD Disk Pools. | | |
| 15 | The design shall provide automatic rerouting of I/O traffic from the host in case of primary path failure. The I/O paths from the servers and servers shall be load balanced. The Storage array based host resident HBA load balancing software should be provided for every SAN attached server. | | |
| 16 | The Storage system shall be configured with GUI-based Storage Management Software Tools for Management. A single command console shall be used for the entire storage system. In case an enterprise version of the Storage Array specific Storage Manager exists, then the same should be proposed. Vendor should provide storage management system for configuration, administration and monitoring. The storage array must provide performance monitoring, reporting and tuning (QoS). The performance monitoring should be real-time and historical providing IOPS, Response Time and utilization of individual components within the storage. If licensed separately, the vendor needs to provide the necessary licenses for full capacity. The storage management software must provide multiple levels of access control including role-based security, provision to send alerts via email. | | |
| 17 | The storage system shall support the latest OS releases of the following mentioned servers / OS :- Servers running Windows, Linux, HP-UX, AIX, Solaris etc. It should also support popular virtualization platforms like VMware. | | |
| 18 | The storage system shall support and provision for connectivity (either directly or through switches) to industry standard interfaces such as Fibre Channel | | |
| 19 | The storage system shall support connectivity to multiple host platforms simultaneously | | |
| 20 | The storage system shall support connectivity to multiple host platforms simultaneously | | |
| 21 | The storage system shall support data replication from One storage system to another storage system without any server intervention. | | |
| 22 | The storage system should support oracle data guard replication between DC and Near site, Near site & DR and DC and DR sites. | | |
| 23 | The storage system shall support hardware based data replication to a remote site | | |
| 24 | The NDR solution shall be deployed using Storage-to-Storage system replication without impacting any Applications Server or Applications | | |

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| | involvement. | | |
| 25 | The DR solution shall be deployed using Storage-to-Storage system replication without impacting any Applications Server or Applications involvement. | | |
| 26 | Licenses for point in time copies, full volume copies should be provided for the complete proposed capacity that is being supplied and configured in DC, DR and NDR Storage. However minimum 10 TB synchronous replication license to be factored both in DC and NDR storage for Near DR storage base synchronous replication for near ZERO data lose from day one. | | |
| 27 | Should be firmware upgradable for functionality improvements and enhancements. Must support non-disruptive upgrade of core software, BIOS, snapshot, clone remote mirroring and management software without shutting down the storage system. All host attached servers must be fully operational during system level or maintenance upgrade procedures. | | |
| 28 | The Storage System should have automatic failover architecture with redundant, hot-swappable components, such as disks, interfaces, disk controllers, power supply, Cooling fan sub system, and other major components | | |
| 29 | The storage configuration should be such that it provides 99.999 data availability guarantee and meets the Zero data loss in the solution design | | |
| 30 | The Storage System should be configured with sufficient number of spares disks to provide dynamic reallocation to spare disk automatically, in case of hard disk failure. | | |
| 31 | The Storage management software should provide real time monitoring, and historical analysis of storage performance and capacity such as total no. of IOPS, read/write %, cache hit %, throughput etc for analyzing the performance of the system. The Storage System should have tamper proof audit log for recording all service/maintenance and host log actions on the storage. | | |
| 32 | The Storage System must support thin provisioning or virtual provisioning. | | |
| 33 | The Storage System should be able to create volumes that stripe across multiple RAID groups for better load distribution and prevention of hot spots. Any license if required must be enabled for the proposed formatted capacity | | |
| 33 | The Storage System should have Pro-active maintenance – self monitoring, self-diagnosing, and error correction mechanisms. | | |
| 34 | The Storage System design should provide automatic rerouting of I/O traffic from the host in case of primary path failure. The I/O paths from the servers should be load balanced. | | |
| 35 | The Storage must be provided with Advanced multi-path software from the storage vendor for the no. of hosts and OS connected to storage as per the solution or bidder can quote for native multipathing if supported by native OS feature | | |
| 36 | The proposed storage to provide data encryption at rest at controller level or using self-encrypting drives without impacting storage performance. The features should be provided for all proposed disk type. | | |
| 37 | Storage must support concurrent data replication i.e. DC to DRC (A-Sync) and DC to NLS (Sync) or cascaded data replication i.e. DC to NLS (Sync) and NLS to DRC (Async) to provide zero data loss 3-way DR replication. The Storage Replication in synchronous mode should allow | | |

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| | flexibility of continuing the OLTP transactions on Primary Site in case there is any disruption in the link between the Datacenter and Near Site | | |
| 38 | In case of Primary Site failure, Failover from Primary to DR Site should be allowed, along with ability to synchronize data lag incrementally from Near DR to DR Site, to ensure there is zero data loss at DR Site. Once the Primary Site is recovered post a disaster, when the failback process from DR to Primary Site is executed, re-synchronization of Primary Site should be possible from Near DR as well as DR Site. There should be flexibility to choose any of the sites for resynchronization. | | |
| 39 | In case of only Near DR Site failure & recovery, the resynchronization of Near DR Site should be possible from Primary Site as part of resuming 3-way storage replication setup | | |
| 40 | The design shall also provide provision for following: Allocating and revoking disk space Creating RAID groups and logical units Dynamic Volume Expansion The storage system shall support Oracle ASM for RAC. | | |
| 41 | The storage system must support IPv4 & IPv6. | | |
| 42 | Bidder to factor the required Encryption licenses at storage level, the Bank may intends to have storage level encryption for the data in all the sites. | | |
| 43 | All passive cablings between server-to-server, server-to-tape, storage-to-tape, server -to -SAN, Storage-to SAN (including and all other combinations connected) (for connecting between new-to-new or new-to-existing setup) will be provided and installed/ configured by the bidder. The management of these cabling (including replacement whenever required) to be provided by the bidder during the tenure of the contract without any additional cost to the Bank. | | |
| 44 | The bidder has to give certificate of assurance for supply of proposed storage solution over a period of five (5) year and support for period of seven (7) year shall be submitted on OEM letter head duly signed by authorized signatory. | | |
| 45 | Bidder should mention maximum rated power (watts) and cooling (BTU/hr) and rack space requirement for the server. | | |
| 46 | The system should be quoted with 5years with 24 x 7 and 4 HR CTR Support by the OEM. (3 years Upfront warranty and AMC for year 4th and Year 5 th) The operating system, any system software's, management tools and security tools should also be quoted with 3 years and ATS for year 4 and Year 5 support 24x7 support. All the hardware should be quoted with 99.999% SLA uptime (calculated monthly) with 4 hours response time. Proactive services like Patches & fixes for the OS shall be provided free of cost during contract period for all the systems quoted. The servers will be commissioned by the OEM certified engineers only. The supplied hardware should be covered under Data Center mission critical or equivalent support. The on-site support will be by the OEM certified engineers only. | | |

Table H Minimum Technical Requirement for Network Attached Storage at DC, DR

| Sr. No. | Required Minimum Specifications | Compliance (Yes/No) | Remark |
|---------|---|---------------------|--------|
| 1 | Make: Netapp or Hitachi or Dell EMC or IBM or Oracle or HPE Model:..... | | |
| 2 | Propose Network Attached Storage System (NAS) with no single point of failure architecture. NAS solution should have file access with host connectivity for CIFS and NFS. | | |
| 3 | Proposed storage must have minimum two numbers of active-active SAN storage controllers for better performance and redundancy and should be scalable up to 6 node | | |
| 4 | The Storage should be supplied with 20 TB usable with all flash drives to support 50000 NFS IOPS/concurrent connection or above over 10Gbps Ethernet with response time of less than 2 milliseconds excluding all overhead configuration like RAID (RAID 6) configuration formatting and hot spare disk. The storage array must support online expansion of RAID Group/Disk Group. The proposed storage system should be scalable to reach 100,000 NFS IOPS and 30 TB with the above workload characteristic. The compliance document should be accompanied with a letter from the OEM, confirming to this requirement. | | |
| 5 | Storage should be configured minimum 8*16 Gbps FC port and minimum of 8 *10 G base SR ports from day -1 for cluster interconnect overall and the storage array should have minimum 4 back end ports on 12Gbps SAS technology. | | |
| 6 | The proposed storage array must support all Industry Standard RAID levels including 0, 1, 10, 5 and 6. The storage array should allow online expansion of existing RAID/Disk group. | | |
| 7 | The storage array should support Global Hot Spare (HS) Disks. A minimum of one global hot spare per 30 disks should be supplied and configured. These should be of the same type as used for all the type of disks used in this solution. | | |
| 8 | The storage array must have complete cache protection mechanism either by de-staging data or providing complete cache data protection with battery backup for up to 72 hours or more. | | |
| 9 | The storage array must have Space-efficient copy-on-write snapshots; supports NDMP-based backup | | |
| 10 | The Storage should support the following Network Protocols : NFS v3 & v4 (TCP/IP; UDP/IP); CIFS, NDMP v3, iSCSI (multi-target & multi-LUN), SNMP MiB II, HTTPS . | | |
| 11 | The storage array should support industry-leading Operating System platforms & clustering including: Windows, VMWare, Linux, Sun Solaris, HP-UX, IBM-AIX, OS, etc. | | |
| 12 | The proposed storage should perform write cache mirroring for data availability. The cache mirroring should happen over dedicated paths/bus between the controllers without using the external host and/or disk ports. | | |
| 13 | The proposed storage array must have minimum 128 GB memory across the two SAN controllers and scalable to 256 GB | | |
| 14 | The cache management should be adaptive as per the I/O workload. | | |

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| | The storage should dynamically allocate cache to accommodate the changing I/O workload and not restrict the write cache to value less than 20% of total cache available. | | |
| 15 | The proposed storage array systems must natively support automated Sub-LUN tiering of data within the Storage to achieve improved performance and lower Total cost of Ownership. | | |
| 16 | The storage array should have No Single Point of Failures (NSPoF) providing high availability at component and functional level. | | |
| 17 | The storage array should allow firmware up-gradation for functionality improvement and enhancements. Must support non-disruptive upgrade of core software. | | |
| 18 | Array should be provide wish all software like clone, snap shot, replication, performance management & QOS | | |
| 19 | The storage array should support pointer based, space efficient Snapshots. The full copy Clones with update incremental data synchronization. The snapshot copies to be independent of each other, restoring a snapshot of production LUN should not invalidate the rest of the snaps for the same production LUN. If licensed separately, necessary licenses for entire capacity to be included. | | |
| 20 | The storage array must provide virtual/thin provisioning. If licensed separately, necessary licenses for entire capacity to be included. | | |
| 21 | The storage array should support policy-based compression and/or deduplication providing space efficiency. | | |
| 22 | The proposed storage array must support data at rest encryption offering industry standard certification/compliance. The storage array may implement data at rest encryption using self-encrypting drives or controller based functionality there by not impacting performance. | | |
| 23 | Synchronous and asynchronous replication with 2/3-way topology should be supported. If licensed separately, necessary licenses for asynchronous replication for entire capacity with above features to be included. | | |
| 24 | The storage array must support latest versions of leading operating systems like Solaris (Solaris 10 and onwards) Linux (RHEL and SUSE), Windows 2012/2008, UNIX (AIX / HP-UX /Solaris), etc. The array system shall support virtualized environment for VMware, Citrix Xen Server and Microsoft Hyper-V. | | |
| 25 | Offered Storage Shall support all above OS-level Clustering from leading OEM's. | | |
| 26 | Appropriate RAID level to be used for meeting the SLAs. Appropriate disk to be provided for creating clone copies of data within the storage. | | |
| 27 | Should support minimum of 65534 subdirectories for a given directory or share as a part of the proposed NAS | | |
| 28 | The bidder has to give certificate of assurance for supply of proposed NAS over a period of five (5) year and support for period of seven (7) year shall be submitted on OEM letter head duly signed by authorized signatory. | | |
| 29 | Bidder should mention maximum rated power (watts) and cooling (BTU/hr) and rack space requirement for the server. | | |
| 30 | The system should be quoted with 5years with 24 x 7 and 4 HR CTR Support by the OEM. (3 years Upfront warranty and AMC for year 4 and Year 5) | | |

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| | <p>The operating system, any system software's, management tools and security tools should also be quoted with 3 years and ATS for year 4 and Year 5 support 24x7 support.</p> <p>All the hardware should be quoted with 99.99% SLA uptime (calculated monthly) with 4 hours response time.</p> <p>Proactive services like Patches & fixes for the OS shall be provided free of cost during contract period for all the systems quoted.</p> <p>The servers will be commissioned by the OEM certified engineers only.</p> <p>The supplied hardware should be covered under Data Center mission critical or equivalent support.</p> <p>The on-site support will be by the OEM certified engineers only.</p> | | |
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Table I: Minimum Technical requirement for Backup Software

| Sl.No. | Technical Requirement | Compliance Yes/No | Remarks |
|--------|---|-------------------|---------|
| 1 | Make: IBM / Microfocus/ Varitas / Commvault/Dell Software Version:..... | | |
| 2 | Enterprise backup software that supports online backup of databases namely Oracle, DB2, SQL OS namely Windows, Linux, Unix and VMs backup. | | |
| 3 | Should be available on various OS platforms which are supported by OEMs such as different variant of Windows, Linux and UNIX platforms and be capable of supporting backup / restores from various platforms including Windows, Unix and Linux. Both Server and Client software should be capable of running on all these platforms. | | |
| 4 | The licensing for the Backup software must be in Usable Capacity in such a way that the migration of operating systems and/or databases/mail servers of servers/clients must not warrant a change in license. The licensing must be independent of the server processor, whether it is RISC based or SISC based processors or x86. Also, same license can be used to initiate backup in DC , DR and NDR | | |
| 5 | 150 TB front end capacity licenses and same license can be used in DC, DR and NDR | | |
| 6 | Bidder to provide compute resources for running the backup software either as virtual VM in proposed compute farm or a physical server. It should support clustered configurations of the backup application in a cluster. I.e. backup application should failover as a highly available resource in a cluster. | | |
| 7 | SAN based LANFREE Backup to tape drives, built-in alerting mechanism, built-in centralized, policy driven management feature, encryption support. Should have built-in centralized, policy driven management feature by which all Backup servers can be managed from central location. | | |
| 8 | Any Server and OS required for the Backup need to be quoted separately | | |
| 9 | Backup Software Solution should support Full/Incremental backup having capability of taking backups on LTO Tape Drives. Backup Software solution should also support Industry standards encryption (128/256 bit). Bidder has to install Backup software solution and make the necessary configuration with proposed tape library. | | |
| 10 | Ability to backup data from one platform and restore it from another (limited to genera of operating systems (Unix to Unix, Windows to Windows) to eliminate dependence on a particular OS machine and for | | |

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| | disaster recovery purposes. | | |
| 11 | Software should have full command line or GUI based support on above mention OS's. | | |
| 12 | Should have SAN support on above mention OS's. Capable of doing LAN free backups to Tape for all platforms mentioned above. | | |
| 13 | The backup software must have the capability to migrate files from one media to another without changing the time stamp of the data that is backed up. | | |
| 14 | The backup software must have the capability to encrypt the backed-up data. The proposed backup solution must have at least AES 256-bit encryption capabilities. | | |
| 15 | The Backup software must not have any restrictions on the number of drives that can be attached in the tape library. There should be no additional licensing if the number of tape drives is increased in the tape library. | | |
| 16 | Should support clustered configurations of the backup application in a cluster. i.e. backup application should failover as a highly available resource in a cluster. | | |
| 17 | Software should have an inbuilt feature for Tape to tape copy feature (cloning, within the tape library) to make multiple copies of the tapes without affecting the clients for sending tapes offsite as part of disaster recovery strategy. | | |
| 18 | Should support different levels of User access, Administrator, User, Operator, so that only the authorized personnel can make changes or view the status based on the rights they have. | | |
| 19 | The software should have the capability to replicate the backed-up data to the DR site for the selected systems only and should leverage de-duplication capability while replicating to DR site. | | |
| 20 | The Software should have capability to define retention policy to the data & not to a Media. | | |
| 21 | Backup Software should also have a Capacity based licensing | | |
| 22 | The backup software should be able to leverage the backup data of the Virtual environment for other purpose like Test/Dev, DevOps, Analytics. | | |
| 23 | The proposed backup solution should support tape mirroring of the same job running concurrently with primary backup. | | |
| 24 | The proposed backup solution shall be able to copy data across firewall. | | |
| 25 | The proposed backup solution shall support synthetic full backup / Virtual full backups. | | |
| 26 | The proposed backup software should support both on-premise and secure hosted backup solution | | |
| 27 | The proposed backup software should give the option to allow de duplication to be done either on the Application Server or on the Backup Server or at the Target Device. | | |
| 28 | The backup software should support backup to disk /VTL / Deduplication Device via Fiber channel | | |
| 29 | The backup software/solution should support 256-bit encryption | | |
| 30 | The proposed backup software should use the same API for software and hardware deduplication | | |
| 31 | The proposed backup solution have hot-online backup solution for different type of Enterprise databases and applications | | |
| 32 | The proposed backup solution has in-built frequency and calendar | | |

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| | based scheduling system. | | |
| 33 | The proposed backup solution has in-built media management and supports cross platform device and media sharing in SAN environment. It provides a centralized scratched pool thus ensuring backups never fail for media | | |
| 34 | The proposed backup solution support de-multiplexing of data cartridge to another set of cartridge for selective set of data for faster restores operation to client/servers. | | |
| 33 | The proposed backup solution shall be configured with unlimited client and media licenses for both SAN based backup and LAN based backup. | | |
| 34 | The proposed backup solution shall be configured in such a fashion that no extra license for client and media servers is required while moving from LAN to SAN based backup. | | |
| 35 | The proposed backup solution should allow creating tape clone facility after the backup process. | | |
| 36 | The proposed backup solution should support tape mirroring of the same job running concurrently with primary backup. | | |
| 37 | The proposed backup solution shall have same GUI across heterogeneous platform to ensure easy administration. | | |
| 38 | The bidder has to give certificate of assurance for supply of proposed solution over a period of five (5) year and support for period of seven (7) year shall be submitted on OEM letter head duly signed by authorized signatory. | | |

| Table J: Minimum Technical requirement for Disc Based Backup | | | |
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| Sl.N. | Specification | Compliance Yes/No | Remarks |
| | Make:Dell/HPE/NetApp/Quantum/Oracle/IBM/Cisco/ Commvault/Oracle Model:..... | | |
| 1 | Offered Disk to disk backup device shall be Modular design to allow configuration, add capacity increase performance. | | |
| 2 | Offered device shall be offered with Minimum of 150 TB of usable space scalable to more than 300 TB usable space. | | |
| 3 | Offered device shall have separate dedicated drives for Operating System of appliance and shall not participate in data backup. | | |
| 4 | Offered device shall be protected with hardware raid 6 from the factory so that no raid configuration is required in field for data drives. | | |
| 5 | Offered device shall support NAS target like CIFS | | |
| 6 | Offered device shall have the ability to configure at-least combination of 4 tape Libraries & NAS targets. | | |
| 7 | Offered device shall have capability to deliver selective restore from disk Library itself. | | |
| 8 | Offered device shall have integrated de-duplication license and shall have optional support for replication to remote location in a low bandwidth mode so that only unique – Non Duplicated data flows to remote location. | | |
| 9 | Offered device shall support intelligence for understanding Source based (At Client application level, Backup Server level and media server level) | | |

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| | de-duplication so that only unique – Non duplicated data copies to offered device. | | |
| 10 | Offered device shall support receiving non duplicated data from remote locations or branch office directly from the application servers / Client servers in low bandwidth mode without using any backup or replication-based device at remote location / Branch office. | | |
| 11 | Offered device shall have Minimum of 4 x 10Gbps IP SR, 4 x 16Gbps FC and minimum of 4 x 1Gbps IP connection. | | |
| 12 | Offered disk-based backup device shall also support encryption functionality. | | |
| 13 | Offered disk-based backup appliance shall have flexibility to enable or disable the de-duplication. | | |
| 14 | Offered disk-based backup appliance shall support VLAN tagging. Offered IP ports shall also support Port bonding in Adaptive Load balancing as well as in Active-backup mode. | | |
| 15 | When fully populated, offered device shall support rated write performance of more than 25 TB per hour in native mode i.e. without source side deduplication. | | |
| 16 | The bidder has to give certificate of assurance for supply of proposed disk backup over a period of five (5) year and support for period of seven (7) year shall be submitted on OEM letter head duly signed by authorized signatory. | | |
| 17 | Bidder should mention maximum rated power (watts) and cooling (BTU/hr) and rack space requirement for the server. | | |
| 18 | <p>The system should be quoted with 5years with 24 x 7 and 4 HR CTR Support by the OEM. (3 years Upfront warranty and AMC for year 4 and Year 5)</p> <p>The operating system, any system software's, management tools and security tools should also be quoted with 3 years 24x7 support.</p> <p>All the hardware should be quoted with 99.99% SLA uptime (calculated monthly) with 4 hours response time.</p> <p>Proactive services like Patches & fixes for the OS shall be provided free of cost during contract period for all the systems quoted.</p> <p>The servers will be commissioned by the OEM certified engineers only.</p> <p>The supplied hardware should be covered under Data Center mission critical or equivalent support.</p> <p>The on-site support will be by the OEM certified engineers only.</p> | | |

| Table K: Minimum Technical requirement for Tape Backup Library | | | |
|--|--|-------------------|---------|
| Sl.No. | Technical Requirement | Compliance Yes/No | Remarks |
| 1 | Make: IBM / HPE / Spectra Logic / Quantum/Dell/Oracle | | |
| 2 | Enterprise tape library built with rack hosting accessor, tape drives and cartridge slots. | | |
| 3 | Minimum No. of tape drives DC and DR Site: 2 X LTO 7 FC drives and 10 X LTO 8 FC drives | | |
| 4 | Tape Library shall be offered with minimum of 200 cartridge slots and barcode reader. Bidder should provide all the drives in all the slots configured. Bidder should provide all the drives in all the slots configured | | |

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| 5 | Proposed tape library should have features Dynamic storage management, enabling users to dynamically create and change logical libraries and configure any drive into any logical library. Analytic software that provides system configuration operations, reporting, automated scheduling for scanning tapes, cartridge movement for maintenance and management purposes, Barcode reader, Encryption support. | | |
| 6 | The Tape Library should be scalable to 20 tape drives and additional 100 cartridge slots by adding expansion frames. | | |
| 7 | Tape Library shall provide web based remote monitoring capability. | | |
| 8 | Tape Library shall provide native Fiber connectivity to SAN Environment. | | |
| 9 | Tape Library shall provide native minimum 8 Gbps FC interface connectivity to SAN switches with redundancy. | | |
| 10 | Tape library shall support removable magazine and mail slot. | | |
| 11 | Tape Library shall have redundant power supply. | | |
| 12 | Tape Library shall be supplied with software which can predict and prevent failures through early warning and shall also suggest the required service action. | | |
| 13 | Offered Software shall also have the capability to determine when to retire the tape cartridges and what compression ratio is being achieved. | | |
| 14 | Offered tape Library shall have partitioning support and shall support at-least two number of partition so that configured drives can have owned partition and slots | | |
| 15 | Offered LTO-7 and LTO-8 drive in the Library shall conform to the Data rate matching technique for higher reliability | | |
| 16 | The bidder has to give certificate of assurance for supply of proposed tape libeary over a period of five (5) year and support for period of seven (7) year shall be submitted on OEM letter head duly signed by authorized signatory. | | |
| 17 | Bidder should mention maximum rated power (watts) and cooling (BTU/hr) and rack space requirement for the server. | | |
| 18 | <p>The system should be quoted with 5years with 24 x 7 and 4 HR CTR Support by the OEM. (3 years Upfront warranty and AMC for year 4 and Year 5)</p> <p>The operating system, any system software's, management tools and security tools should also be quoted with 3 years 24x7 support and ATS for 4th & 5th Year with 24x7 support</p> <p>All the hardware should be quoted with 99.99% SLA uptime (calculated monthly) with 4 hours response time.</p> <p>Proactive services like Patches & fixes for the OS shall be provided free of cost during contract period for all the systems quoted.</p> <p>The servers will be commissioned by the OEM certified engineers only.</p> <p>The supplied hardware should be covered under Data Center mission critical or equivalent support.</p> <p>The on-site support will be by the OEM certified engineers only.</p> | | |

Table L: Minimum Technical requirement for SAN Director/switch

| Sl.No. | Technical Requirement | Compliance Yes/No | Remarks |
|--------|---|-------------------|---------|
| 1 | Model: Brocade/Cisco | | |
| 2 | Redundant 2 no. of SAN Switch with latest generation 32/16 Gbps FC Switches with enterprise-class availability features such as Dual- | | |

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| | redundant control processors, hot swappable FC modules, power and cooling subsystems at DC & DR | | |
| 3 | Minimum 128 X 32 Gbps/16 Gbps FC ports per Switch | | |
| 4 | Enterprise bundle, SAN management portal. Any Server required to install this feature bidder has to quote the same with SAN Switch. | | |
| 5 | Minimum 5 meters FC cables for equivalent no. of ports proposed. Bidder need to provide longer FC cable >5 meters if required | | |
| 6 | The bidder has to give certificate of assurance for supply of proposed SAN switch over a period of five (5) year and support for period of seven (7) year shall be submitted on OEM letter head duly signed by authorized signatory. | | |
| 7 | Bidder should mention maximum rated power (watts) and cooling (BTU/hr) and rack space requirement for the server. | | |
| 8 | <p>The system should be quoted with 5years with 24 x 7 and 4 HR CTR Support by the OEM. (3 years Upfront warranty and AMC for year 4 and Year 5)</p> <p>The operating system, any system software's, management tools and security tools should also be quoted with 3 years 24x7 support and ATS for 4th & 5th Year with 24x7 support</p> <p>All the hardware should be quoted with 99.99% SLA uptime (calculated monthly) with 4 hours response time.</p> <p>Proactive services like Patches & fixes for the OS shall be provided free of cost during contract period for all the systems quoted.</p> <p>The supplied hardware should be covered under Data Center mission critical or equivalent support.</p> <p>The on-site support will be by the OEM certified engineers only.</p> | | |

| S/N | Table M Minimum Technical requirement for EMS Tool | Compliance (Yes/No) | Remark |
|-----|--|---------------------|--------|
| 1 | The proposed EMS solution should be an integrated, modular and scalable solution to provide comprehensive fault management, performance management, traffic analysis and business service management, IT service desk\ help desk\trouble ticketing system & SLA monitoring functionality. | | |
| 2 | Proposed solution should have Out-of-the-Box connectors/ probes to integrate with multiple EMS solutions, including industry standard solutions from Micro Focus, IBM, CA, Microsoft etc., and should also provide mechanisms (XML, APIs etc.) to integrate with other EMS and NMS solutions, to provide an integrated topology and event views and reports to the operator. | | |
| 3 | It should have a secured single sign-on and unified console for all functions of components offered for seamless cross-functional navigation & launch for single pane of glass visibility across multiple areas of monitoring & management. | | |
| 4 | OEM must have India presence for last 5 years on both Sales and Support operation along with R&D | | |
| 5 | The system should be accessible via a Web based GUI console/portal from intranet as well as from internet. | | |
| 6 | The solution should have self-monitoring ability to track status of its critical components & parameters such as Up/Down status of its services, applications & servers, CPU utilization, Memory capacity, File system space, Database Status, synchronization status between primary | | |

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| | and secondary system and event processing etc. It should provide this information in real-time through graphical dashboards, events/alarms as well as in the form of historical reports. | | |
| 7 | The proposed solution should be IPv6 ready including hardware & software. | | |
| 8 | The EMS solution should have dashboard to showcase business and IT KPI onto a single dashboard view and should be drill downable | | |
| 9 | Proposed NMS solution must be ISO 27001 certified to ensure security compliances. | | |
| 10 | Proposed EMS Solutions MUST have been in operations in at least 1 or more deployments in BFSI/government/PSU/enterprise sector, monitoring and managing at least 5000 network nodes in each of the cases individually. Self-certification of the OEM, along with the customer names and proof of software delivery must be submitted at the time of bid submission. | | |
| 11 | Solution should ensure compatibility of existing Infrastructure with the procured infrastructure and it must fill the end functionality of the project. Offered solution should support bi-directional integration between the NOC and SOC to have the single consolidated console of infrastructure and security events. | | |
| 12 | The proposed Enterprise Management tools must be able to monitor end to end performance of Server Operating Systems & Databases and Should be able to manage distributed, heterogeneous systems – Windows, UNIX & LINUX from a single management station. | | |
| 13 | There should be a single agent on the managed node that provides the system performance data, and for event management it should be able to prioritize events, do correlation & duplicate suppression ability to buffer alarms and provide automatic actions with capability to add necessary annotations | | |
| 14 | The system must support multiple built in discovery mechanisms for e.g. Active Directory, Windows Browser, DNS with capability to discover and services discovery | | |
| 15 | Each operator should be provided with user roles that should include operational service views enabling operators to quickly determine impact and root cause associated with events. | | |
| 16 | The system should integrate with Helpdesk / Service desk tool for automated incident logging and also notify alerts or events via e-mail or SMS. | | |
| 17 | The system should have context-based analysis and forecasting based on performance data with automated policy deployment with detailed, intelligent monitoring of performance and availability data collection | | |
| 18 | The Solution offered should be highly scalable to be able to monitor thousands of servers in data Center. | | |
| 19 | Solution should provide alarm correlation and facilitate reduction of total number of alarms displayed by means of intelligent alarm correlation, suppression and root cause analysis techniques built in to the system. The system must ensure reduction in MTTR by means of advanced event correlation, filtering and root cause analysis. | | |
| 20 | The proposed Alarm Correlation and Root Cause Analysis system shall integrate network, server and database performance information and alarms in a single console and provide a unified reporting interface for network components. The current performance state of the entire | | |

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| | network & system infrastructure shall be visible in an integrated console. | | |
| 21 | It should have capability to perform cross domain correlation with alarm correlation from Network Monitoring tool, Systems monitoring tool and other domain monitoring tools. | | |
| 22 | Alarm Filtering should allow flexible filtering rules for SDC staff to filter the alarms by category, severity, elements, duration, by user, by views, by geography or by department. | | |
| 23 | The proposed solution should provide out of the box root cause analysis with multiple root cause algorithms inbuilt for root cause analysis. | | |
| 24 | Alarms should be mapped to the live topology views and real time updates to topology based on alarm occurrences. | | |
| 25 | Should trigger automated actions based on incoming events / traps. These actions can be automated scripts/batch files. | | |
| 26 | Should be able to send e-mail or Mobile –SMS to pre-defined users for pre-defined faults. | | |
| 27 | Should Detect, collect and maintain information about Managed Servers, including packaged, unpackaged software, runtime state, host/guest relationships and more. | | |
| 28 | Should have capability to auto install agent onto target server | | |
| 29 | Defines server build sequences for provisioning, incorporating operating systems, patches, and software policies. Supports Linux, and Windows. However in case of Solaris/AIX/HP-UX , it is responsibility of bidder to apply OS patches of Solaris/AIX/HP-UX server on regular interval during contract period. | | |
| 30 | Identifies server vulnerabilities quickly and easily and reduces the time needed to patch multiple servers. Enables patch policy creation and flexible patch deployments. Supports native patch formats for all major operating systems. Provides out-of-the-box integration with Microsoft Patch Network and Red Hat Enterprise Linux | | |
| 31 | Enables rapid troubleshooting and configurable compliance management by comparing servers to reference servers, most golden reference snapshots, industry best practices, or user-defined scripts. Provides comprehensive compliance dashboard with consolidated servers and cross-tier compliance views. | | |
| 32 | Uses the communications channel with enhanced security features, audit logs, and access control policies to provide direct connections to servers in any location. Supports remote desktop connections, Windows PowerShell, and any shell of Linux environments. | | |
| 33 | Improves automation efficiency by managing remote systems and executing tasks from a command line interface. Also supports Windows PowerShell to provide a command line interface (CLI) to Windows servers. | | |
| 34 | Provides dynamic, real-time, and historical reports into hardware, software, patches, and operations activities in complex, heterogeneous data Centers. Includes out-of-the-box compliance reports and at-a-glance compliance status with actionable links to servers, policies, and other objects. Exports reports to HTML and comma-separated values (CSV) formats. | | |
| 35 | Will support audit and remediation against industry best practice content such as CIS, MSFT. | | |
| 36 | Open a remote terminal or get complete server history directly in the application visualization interface | | |

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| 37 | System should provide a shell interface to let users operate through a command line across multiple servers simultaneously. | | |
| 38 | The Network Management function must monitor performance across heterogeneous networks from one end of the enterprise to the other. | | |
| 39 | The solution should allow for discovery to be run on a continuous basis which tracks dynamic changes near real-time; in order to keep the topology always up to date. This discovery should run at a low overhead, incrementally discovering devices and interfaces. | | |
| 40 | The proposed Network Fault Management console must also provide network asset inventory reports | | |
| 41 | The tool should automatically discover different type of heterogeneous devices (all SNMP supported devices i.e. Router, Switches, LAN Extender, Servers, Terminal Servers, Thin-Customer and UPS etc.) and map the connectivity between them with granular visibility up to individual ports level. The tool shall be able to assign different icons/ symbols to different type of discovered elements. It should show live interface connections between discovered network devices | | |
| 42 | It should support various discovery protocols to perform automatic discovery of all L2, L3 Network devices across SWAN and any further Network connectivity's planned in future. | | |
| 43 | The tool shall be able to discover IPv4 only, IPv6 only as well as devices in dual-stack. In case of dual stack devices, the system shall be able to discover and show both IPv4 and IPv6 IP addresses. | | |
| 44 | The tool shall be able to work on SNMP V-1, V-2c & V-3 based on the SNMP version supported by the device. It shall provide an option to discover and manage the devices/elements based on SNMP as well as ICMP. | | |
| 45 | The proposed Network Fault Management solution must support extensive discovery mechanisms and must easily discover new devices using mechanisms such as SNMP Trap based discovery. It must also allow for inclusion and exclusion list of IP address or devices from such discovery mechanisms | | |
| 46 | The proposed solution must provide a detailed asset report, organized by vendor name, device type, listing all ports for all devices. The Solution must provide reports to identify unused/dormant Network ports in order to facilitate capacity planning | | |
| 47 | The system should be able to clearly identify configuration changes / policy violations / inventory changes across multi-vendor network tool. | | |
| 48 | The system should support secure device configuration capture and upload and thereby detect inconsistent "running" and "start-up" configurations and alert the administrators. | | |
| 49 | The proposed system should be able to administer configuration changes to network elements by providing toolkits to automate the following administrative tasks of effecting configuration changes to network elements: a) Capture running configuration b) Capture start-up configuration c) Upload configuration d) Write start-up configuration e) Upload firmware | | |
| 50 | The proposed fault management solution must able to perform "load & merge" configuration changes to multiple network devices | | |
| 51 | The proposed fault management solution must able to perform real-time or scheduled capture of device configurations | | |

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| 52 | Reporting solution should be able to report on Service Level status of configured business service. | | |
| 53 | It should be able to collect and collate information regarding relationship between IT elements and business service, clearly showing how infrastructure impacts business service levels. | | |
| 54 | The solution should be user configurable for building additional reports. | | |
| 55 | Solution should be able to collect Key performance measurements and statistics from all network domains and store it. This data is to be used for evaluation of performance of the end to end network infrastructure/services. | | |
| 56 | The performance management system shall be able to collect and report data like: a. Packet delay and packet loss b. User bandwidth usage rate d. Network availability rate e. CPU usage rate f. Input/output traffic through physical ports g. Input/output traffic through logical ports | | |
| 57 | The Performance Management shall have user defined set of reports like: a. Summary Reports for specific groups: Reports displaying per group of resources the group aggregations for a set of metrics (for example, per City, the maximum traffic or the total traffic). b. Summary Reports for specific Resources: Reports displaying for a set of resources the period aggregations for the same set of metrics (for example, per interface, the maximum traffic over the day) c. Detailed chart Reports: Reports displaying for one resource and the same set of metrics the values over the period (for example, the raw collected values for the day). d. Resource Threshold Violation Reports: Reports displaying the resources for which a threshold was violated | | |
| 58 | Should able to support and handle large volume of incident, service requests, changes management etc. | | |
| 59 | Should able to integrate with third party IVR or CTI | | |
| 60 | OGC Gold level or Pink Elephant certifications for ITILv3 process. | | - |
| 61 | The solution should have a Single Architecture and leverage a single application instance across ITIL processes, including unique data and workflows segregated by business unit, cost Center, and user role for Incident, Problem, Change, Knowledge Management, Asset Management and CMDB. | | |
| 62 | Solution should support multi-tenancy with complete data isolation as well as with ability for analysts based on access rights to view data for one, two or more organizational units | | |
| 63 | The solution should provide to browse through CMDB which should offer powerful search capabilities for configuration items and services, enabling to quickly find Cis as well as their relationships to other Cis. | | |
| 64 | Should provide out-of-the-box categorization, as well as routing and escalation workflows that can be triggered based on criteria such as SLA, impact, urgency, CI, location or customer. | | |
| 65 | Should provide modern data analysis methods for insight and value to service desk by leveraging unstructured as well as structured data | | |

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| 66 | Tool Analytics should be completely configurable in terms of source data and results, enabling Process Managers and other IT Users to proactively identify trends that can be used to drive action. Multiple instances shall be allowed to be configured in different ways in different modules for different outcomes – for example one should be able to identify trends in one set of data and subsequently develop linkages with other data, or Analytics can run on top of reporting results to provide further insights from unstructured data. | | |
| 67 | The tool should allow the user to take a screenshot of the error message and sends it to the service desk. The user can type in a couple of text lines to describe the error in simple language. The service desk agent then can pick up the ticket with the information already filled in (category, impact, and assignment). | | |
| 68 | The tool should have the knowledge management OOB – knowledge databases to support investigations, diagnoses, root cause analysis techniques, and creating / updating workarounds, temporary fixes and resolutions | | |
| 69 | The tool should allow the creation of different access levels (i.e. Read only, write, create, delete) to knowledge management system | | |
| 70 | The tool should allow creation and enforced use of data input rules for creating knowledge records For example: mandatory fields for content and information; QA and change approval to move from draft to production | | |
| 71 | The Knowledge Management solution should be available in a Multi Tenanted environment | | |
| 72 | Solution should support comprehensive SLA management platform | | |
| 73 | Must allow creating and applying various operational level parameters to Incidents, Requests, Changes, and Release management modules. | | |
| 74 | The application should have a predefined/customizable field to indicate & track the progress/status of the lifecycle of ticket(s). | | |
| 75 | The tool should provide an audit trail, tracking & monitoring for record information and updates from opening through fulfilment to closure For example: IDs of individuals or groups opening, updating & closing records; dates / times of status & activities updates, etc. | | |
| 76 | SI's must proposed a full fledges Service Level Management Solution that allows for tracking of various service level performances of IT Infrastructure and vendor performance. | | |
| 77 | The solution should support SLA violations alerts during the tracking period. | | |
| 78 | The solution should support managing and maintaining a full history of an SLA. | | |
| 79 | The solution must provide a flexible framework for collecting and managing service level templates including Service Definition, Service Level Metrics, Penalties and other performance indicators measured across infrastructure and vendors | | |
| 80 | Discovery should work without requiring agent installation (that is, agent-less discovery) while discovery Layers 2 through Layers 7 of OSI model | | |
| 81 | Should use Industry-standard protocols such as WMI, SNMP, JMX, SSH to perform discovery without requiring the installation of an agent | | |

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| 82 | Discovery system should have ability to modify out-of-box discovery scripts, create customized discovery scripts | | |
| 83 | The bidder has to give certificate of assurance for supply of proposed solution (Hardware and software) over a period of five (5) year and support for period of seven (7) year shall be submitted on OEM letter head duly signed by authorized signatory. All the hardware should be quoted with 99.50% SLA uptime (calculated monthly) with 8 hours response time | | |
| 84 | Bidder should mention maximum rated power (watts) and cooling (BTU/hr) and rack space requirement for the server. | | |

| S/N | Table O Minimum Technical requirement for Load Balancer with Application Delivery controller (ADC) | Compliance (Yes/No) | Remark |
|-----|---|---------------------|--------|
| 1 | Make: RADWARE/ Citrix /F5 | | |
| 2 | <p>Solution shall be dedicated, purpose built, & Appliance based solution.</p> <p>DC:</p> <ul style="list-style-type: none"> ➤ 1 Pair of ADC & load balancer used for load balancing 8 no. of C/C++ Finacle Application , 2 no. of C24 and 4 no. of Uniser server.- TYPE1 ➤ 1 Pair of ADC & load balancer used for load balancing 4 no. of Finacle Web (HTTP) server - TYPE2 ➤ 1 Pair of ADC & load balancer used for load balancing 3 no. of FEBA Application Server – TYPE2 ➤ 1 Pair of ADC & load balancer used for load balancing 3 no. of FEBA Web servers – TYPE2 <p>DR:</p> <ul style="list-style-type: none"> ➤ 1 Pair of ADC & load balancer used for load balancing 8 no. of C/C++ Finacle Application , 2 no. of C24 and 4 no. of Uniser server.- TYPE1 ➤ 1 Pair of ADC & load balancer used for load balancing 4 no. of Finacle Web (HTTP) server - TYPE2 ➤ 1 Pair of ADC & load balancer used for load balancing 3 no. of FEBA Application Server – TYPE2 ➤ 1 Pair of ADC & load balancer used for load balancing 3 no. of FEBA Web servers – TYPE2 ➤ 1 for UAT environment | | |
| 3 | <p>TYPE 1: The Solution should support minimum 10 Gbps L7 throughput. Solution should support minimum SSL throughput of 5 Gbps.</p> <p>TYPE 2: The Solution should support minimum 5 Gbps L7 throughput. Solution should support minimum SSL throughput of 2 Gbps.</p> | | |

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| | TYPE1: Each device should have minimum 48 GB RAM TYPE2: Each device should have minimum 32 GB RAM | | |
| 4 | TYPE 1: Each Device should have minimum 8 no of 10 G Fiber port with SR module to cover multiple segment load balancing TYPE 2: Each Device should have minimum 6 no of 10 G Fiber port with SR module to cover multiple segment load balancing | | |
| 5 | Dual Power is a started for Banking datacenter to have dual power backup for same appliance. Memory should be good enough to ensure high performance and compatible for all OEMs. | | |
| 7 | Appliance should support a LCD panel/LED to display alerts and fault information for an administrator to monitor the system | | |
| 8 | The solution should support performing load balancing for Layers 4 through 7 of the Open Systems Interface (OSI) reference model with support to the IP, TCP and UDP protocols. | | |
| 9 | The solution should support load balancing based on ROUNDROBIN - Distribute requests in rotation, regardless of the load. LEASTCONNECTION - The service with the fewest connections. LEASTRESPONSETIME - The service with the lowest average response time. LEASTBANDWIDTH - The service currently handling the least traffic. LEASTPACKETS - The service currently serving the lowest number of packets per second, Hashing (URL, Domain, Source IP, Destination IP, and CustomID), SNMP provided metric, Server Application State Protocol (SASP) | | |
| 10 | The solution should support virtual servers that can listen on UDP and TCP ports and has the ability to enable and disable individual servers behind a virtual address. | | |
| 11 | The proposed solution should Support TYPE1: minimum 3 Million L4 concurrent connections and minimum 300k L4 connections per second TYPE2: minimum 2 Million L4 concurrent connections and minimum 200k L4 connections per second | | |
| 12 | The offered solution should provide the configuration wizards for LB etc. | | |
| 13 | Protocols supported: TCP, UDP, FTP, HTTP, HTTPS, DNS (TCP and UDP), SIP (over UDP), RTSP, RADIUS, DIAMETER, SQL, RDP, IS-IS, SMPP | | |
| 14 | The Proposed solution must support Database Load Balancing at Database layer. | | |
| 15 | The solution should support SSL offload - the ability to manage client side SSL traffic by terminating incoming SSL connections and sending the request to the server in clear text. | | |
| 16 | The solution should support end to end SSL if required | | |
| 18 | The proposed solution Should support at least 100000 of concurrent SSL users connected at 2048 key size | | |
| 19 | The solution should support hardware or software based SSL acceleration. | | |
| 20 | The Proposed Solution should support 1024, 2048 and 4096 bit key for SSL offloading | | |

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| 21 | Load Balancer should supports session affinity (sticky sessions) to be deployed with any application e.g Finacle 10.x and FEBA Application and Web | | |
| 22 | The Proposed Solution Should support HTTP caching and compression to minimize the network bandwidth utilization and to optimize the application performance. | | |
| 23 | The Proposed Solution Should support minimum 4 Gbps of compression. | | |
| 24 | The solution should support HTTP hardware or software compression | | |
| 25 | The Solution should support selective compression to avoid known compression problems in commonly used browsers | | |
| 26 | The solution should support one-arm , two-arm mode deployment | | |
| 27 | The solution should have capability to Perform load balancing in Transparent mode (client transparency mode) | | |
| 28 | The Solution Should support IPv4 and IPv6 addressing along with NAT64 and NAT46. | | |
| 29 | The Proposed Solution must support failover capability between data centers in active-active or active-backup modes. The Proposed Solution must have performing load balancing across multiple geographical sites for transparent failover, complete disaster recovery among sites and optimal service delivery , Single application failure etc | | |
| 30 | The Solution Should support seamless failover between units in a pair i.e. it should support transparent failover between 2 devices, the failover should be transparent to other networking devices | | |
| 31 | The solution should support Web Based Management for full device configuration (GUI) | | |
| 32 | The solution should support modifying configuration via modular CLI / SSH | | |
| 33 | The solution should support diagnostics which are readily available and easy to send to support (capture core dumps, configurations, logs, and so on). | | |
| 34 | The solution should Support integration with RSA-SA SIEM Tool for broader visibility and web traffic analysis. | | |
| 35 | The solution should Support integration with Health monitoring Tool based on SNMP v2 and above. | | |
| 36 | The proposed solution should support real Time Reporting and Monitoring for Load-Balancer. | | |
| 37 | The Proposed Solution must have Unified (Centralized) Consolidated Management for Configuration Management, SSL Certificate Management, Configuration Auditing , Reporting etc. | | |
| 38 | The solution should support TCP Multiplexing and HTTP connection pooling as well as support customized multiplexing setting per virtual IP address. | | |
| 39 | The Solution should support Inbuilt Packet logging and capture on demand. | | |
| 40 | The solution should support minimum ip based persistency, session based cookie persistency and headers inspection, url redirection, hash ip, round robin, shortest repose time and least connections, and these are various algorithm support for maximum options and help granular control per service and applications. | | |
| 41 | The proposed solution should have the capability of Rate shaping, QOS Support, Rate Limiting and TCP Surge Protection. | | |
| 42 | The Proposed Solution must have global redirection based on DNS | | |

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| 43 | The Proposed Solution Should be able to monitor TCP, HTTP Based applications. | | |
| 44 | The Proposed Solution Should be Identifying the root cause of slow performance issues | | |
| 45 | For Internet segment all the features mentioned are must and all the modules should be from same OEM however for Intranet segment GSLB can be excluded | | |
| 46 | Bidder should quote same OEM solution for Internet and Intranet segment | | |
| 47 | The appliance should have option to enable forwarder option per service to log actual client IP in webserver log | | |
| 48 | The proposed solution should have capability to handle and Configure multiple load balancing (Layer 7) protocols on same appliance | | |
| 49 | The proposed solution should have capability of Rate Limiting and TCP Surge Protection | | |
| 50 | The proposed solution should have the capability to configure multiple services on same Virtual IP with different ports and services options. | | |
| 51 | The proposed solution should support atleast 5 number of virtual ADC or context or partition or segmentation or VLAN without any additional license | | |
| 52 | The proposed solution Should have Application Visibility. Appliance should support customized reports example, Location of the user, IP Address, Hostname, Resolve Server IP Address etc., Number of Clients rejected etc. | | |
| 53 | The appliance should have feature of Cluster failover over industries standard is preferred with within 3 second failover | | |
| 54 | The solution should have various options to control and redirect user request to ensure proper load distribution and ensure incoming traffic is properly load balanced and distributed for best performance | | |
| 55 | The appliance should have feature of GSLB with Per host name TTL value control GSLB (Global Server Load Balancer) for Application Failover across Datacenter. GSLB should be capable of monitoring health of application across data center example Primary site and DR site. Support DNS Rate Limiting and DNS DNS report per host name | | |
| 56 | The proposed solution should provide DNS reporting per user request with statistics last second, minute, hour usage and peak usage per application host name | | |
| 57 | ADC and Load balancer should support multiple segmentation for different VLAN for load balancing different application. | | |
| 58 | Physical resources like memory, CPU must not be shared between virtual load balancer instance, resulting in predictable performance of each virtual load balancer instance | | |
| 59 | The bidder has to give certificate of assurance for supply of proposed solution over a period of five (5) year and support for period of seven (7) year shall be submitted on OEM letter head duly signed by authorized signatory. All the hardware should be quoted with 99.99% SLA uptime (calculated monthly) with 4 hours response time | | |
| 60 | Bidder should mention maximum rated power (watts) and cooling | | |

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| | (BTU/hr) and rack space requirement for the server. | | |
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| Table P Recommended Response Application time and RTO | Compliance (Yes/No) |
|---|----------------------------|
| Simple transactions like Balance Enquiry, Limit Update, etc. can achieve a 0.15 to 0.2 seconds. | |
| Medium Financial transactions like POS, ATM, IMPS,UPI, Internet Banking, Mobile Banking cash withdrawal can achieve a 0.5 to 0.7 seconds response time. | |
| Complex transactions like Account Opening, Customer Creation, etc. can achieve 2 to 3 seconds response time. | |
| Any other transaction that is fetching large amount of data or having multiple channel interfaces which will take more time and same needs to be validated during System interface Testing. | |
| Response time should be less than <2ms for DC & NDR sync. | |
| Archive Replication gap should be less than <10 min for DC & DR replication. | |
| Recovery point objective (RPO) is ZERO | |
| Recovery Time objective (RTO) is 60 min. | |

Table R**Growth Projections Considered for the RFP**

| Parameters | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-2025 |
|---|---|---------|---------|---------|-----------|
| Branches | Data shall be provided to interested bidders who will purchase the RFP. | | | | |
| Users (Total) | | | | | |
| Users(Concurrent) | | | | | |
| Finacle CRM solution at any point of time | | | | | |
| Total number of customers | | | | | |

Note:

- Concurrent users are those who are not idle while logged in and are performing any kind of enquiry or update transactions
- Each branch is assumed to have an average of 6 users

| Parameters | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-2025 |
|--|---|---------|---------|---------|-----------|
| Number of Saving (SB) accounts | Data shall be provided to interested bidders who will purchase the RFP. | | | | |
| Number of Saving (SB) accounts | | | | | |
| Number of Saving (SB) accounts | | | | | |
| Number of Term deposit (TD) accounts | | | | | |
| Number of Loan accounts(LA) | | | | | |
| Avg. No. of Financial transaction per day from Branch network | | | | | |
| Avg. No. of Financial transaction per day from channels (Through ISO 8583 format) | | | | | |
| Avg. No. of Financial transaction per day through interface (Through Finacle Integrator) | | | | | |
| Avg. No. of Non-Financial transaction per day from Branch network | | | | | |
| Avg. No. of Non-Financial transaction per day from channels (Through ISO 8583 format) | | | | | |
| Avg. No. of Non-Financial transaction per day through interface (Through Finacle Integrator) | | | | | |
| Avg. No. of Financial Batch transaction per day from Branch network | | | | | |
| Avg. No. of Financial Batch transaction per day from channels (Through ISO 8583 format) | | | | | |
| Avg. No. of Financial Batch transaction per day through interface (Through Finacle Integrator) | | | | | |
| Expected EOD/BOD Time Window in Minutes | | | | | |

Commercial Bid**(Amount in Rs.)**

| A. Hardware Cost with 3 years warranty | | | | | | | | | | |
|---|--|-----------------------|------------------|------------------|-------------------|------------------|-------------------|-------------|-------------------|-----------------------------|
| Sl. No. | Item Description | Make and Model | Qty at DC | Qty at DR | Qty at NDR | Total Qty | Unit Price | GST% | GST Amount | Total Price with GST |
| 1 | TYPE -1 RISK/EPIC based Processor Enterprise Class Server with native operating system | | 4 | 4 | 0 | 8 | | | | |
| 2 | TYPE -2 RISK/EPIC based Processor Enterprise Class Server with native operating system | | 4 | 4 | 0 | 8 | | | | |
| 3 | TYPE -3 RISK/EPIC based Processor Mid - ranged RISK/EPIC based processor Server with native operating system | | 1 | 6 | 0 | 7 | | | | |
| 4 | Type 1 - x86 platform with Red Hat Linux 7.7 | | 14 | 14 | 0 | 28 | | | | |
| 5 | Type 2 - x86 platform with Red Hat Linux 7.7 | | 10 | 10 | 0 | 20 | | | | |
| 6 | Type 3 - x86 platform with Red Hat Linux 7.7 | | 2 | 2 | 0 | 4 | | | | |
| 7 | Type 4- x86 platform with Red Hat Linux 7.7 | | 4 | 4 | 0 | 8 | | | | |
| 8 | Type 5 - x86 platform with Red Hat Linux 7.7 | | 9 | 9 | 0 | 18 | | | | |
| 9 | Type 6 - x86 platform with Red Hat Linux 7.7 | | 3 | 17 | 0 | 20 | | | | |
| 10 | Type 7 - x86 platform with Red Hat Linux 7.7 | | 2 | 5 | 0 | 7 | | | | |
| 11 | Network Area Storage (NAS) all flash usable 10 TB | | 1 | 1 | 0 | 2 | | | | |
| 12 | All flash Enterprise Storage usable space 350 TB in RAID 6 | | 1 | 0 | 0 | 1 | | | | |
| 13 | All flash Enterprise Storage usable space 600 TB in RAID 6 | | 0 | 1 | 0 | 1 | | | | |
| 14 | All flash Enterprise Storage usable space 10TB in RAID 6 | | 0 | 0 | 1 | 1 | | | | |
| 15 | Disk Based Backup solution (150 TB usable) | | 1 | 1 | 0 | 2 | | | | |
| 16 | Enterprise class Tape Library with 100 no. LTO 7, 200 no. LTO 8 and 5 cleaning Tap | | 1 | 1 | 0 | 2 | | | | |
| 17 | 128 Port 16Gbps/32Gbps SAN director/Switch | | 2 | 2 | 0 | 4 | | | | |

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|----------------------|---|--|--------------------|--------------------|--------------------|--------------------|--|--|--|--|
| 18 | Load Balancer with Application Delivery controller (ADC)- Type1 for Production | | 1 pair | 1 pair | 0 | 2 pair | | | | |
| 19 | Load Balancer with Application Delivery controller (ADC)- Type2 for Production | | 3 pair | 3 pair | 0 | 6 pair | | | | |
| 20 | Load Balancer with Application Delivery controller (ADC)- Type2 for UAT | | 0 | 1 | 0 | 1 | | | | |
| 21 | Enterprise Management System (EMS) Tool Hardware | | As per requirement | As per requirement | NA | As per requirement | | | | |
| 22 | Any other Hardware required for implementation of deliverables as per SOW, Technical requirement mentioned in RFP and subsequent corrigendum/ addendums | | As per requirement | As per requirement | As per requirement | As per requirement | | | | |
| SUB TOTAL (A) | | | | | | | | | | |

| B. Software/Application/Solution Cost with 1-year Enterprise Primum/standard support | | | | | | | | |
|---|---|------------------|--------------------|------------|------|------------|----------------------|--|
| Sl. No. | Item Description | Make and Version | Qty | Unit Price | GST% | GST Amount | Total Price with GST | |
| 1 | DC, DR and NDR IT- infrastructure monitoring, reporting and Patch management device/server | | 500 | | | | | |
| 2 | Network monitoring, reporting and configuration automation. | | 8000 | | | | | |
| 3 | IT Service/ Helpdesk, call, Change Management, SLA management concurrent user | | 50 | | | | | |
| 4 | Asset management. | | 8000 | | | | | |
| 5 | Middleware monitoring (JBOSS) SPI | | 40 | | | | | |
| 6 | Database monitoring | | 30 | | | | | |
| 7 | Backup software (150 TB capacity-based backup) at DC | | 1 | | | | | |
| 8 | Backup software (150 TB capacity-based backup) at DR | | 1 | | | | | |
| 9 | Third-party software for Finacle 10.x: JBOSS EAP 7.1.2 (64 bit) with java-1.8.0-openjdk-1.8.0.191-b12-o.el6_10.x86_64 rpm with developer package for J2EE application Servers (24x7 Enterprise premium Support for DC and Standard Support for DR & UAT) | | As per requirement | | | | | |

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|------|--|----|--|----|----|----|----|
| | | | | | | | |
| 10 | Third-party software for Finacle 10.x: JBCS or Apache HTTP server version 2.4.23 with mod cluster 1.3.5 Final with software load balancer between web and J2EE layer from JBCS or Apache HTTP for Web Servers(24x7 Enterprise premium Support for DC and Standard Support for DR & UAT) | | As per requirement | | | | |
| 11 | Finacle 10.x & FEBA: RHEL & JBOSS, Subscription with RED Hat & JBOSS to gain access of respective tar/zip download and JAR/Library and GCC Compiler (24x7 Enterprise premium Support for DC and Standard Support for DR & UAT) | | As per requirement | | | | |
| 12 | Third-party software for FEBA & DEH (24x7 Enterprise premium Support for DC and Standard Support for DR & UAT) | NA | NA | NA | NA | NA | NA |
| 12.1 | JRE 1.8 (DEH and Microservices) | | As per requirement | | | | |
| 12.2 | JBOSS EAP 7.1.2 (J2EE Application Server) | | As per requirement | | | | |
| 12.3 | Python 2.7 (Database Server DEH) | | As per requirement | | | | |
| 12.4 | JBCS or Apache httpd 2.4.23 (Web Server) | | As per requirement | | | | |
| 12.5 | Redis Server 3.2 with Enterprise support (For distributed caching DEH and Microservices) | | 6 master instances 6 Slave instances 2 UAT instances | | | | |
| 12.6 | Node JS 8.9.4 (Omni Channel REST APIs with node js based O-Auth Provider Within Omni Channel) | | As per requirement | | | | |
| 12.7 | HA Proxy 1.8.3 (as webserver/load-balancer for servlet application and load-balancer for Rest APIs. Load balancer is mandatory for Rest APIs in OCH) | | As per requirement | | | | |
| 12.8 | Graylog 2.3.2 (consolidate logs for analysis) | | As per requirement | | | | |
| 13 | JRE 1.8 (For Client PC) | | 20 | | | | |
| 14 | JDK 1.8 (For Client PC) | | 20 | | | | |
| 15 | Any other software and OS required for implementation of deliverables as per SOW, Technical requirement mentioned in | | As per requirement | | | | |

| | | | | | | | |
|----------------------|--|--|--|--|--|--|--|
| | RFP and subsequent corrigendum/ addendums. | | | | | | |
| SUB TOTAL (B) | | | | | | | |

| C. 4th and 5th Year comprehensive AMC Cost for Hardware | | | | | | | | | | |
|--|---|-----------------------|------------------|------------------|-------------------|------------------|---------------------------|---------------------------|-------------|-----------------------------|
| Sl. No. | Item Description | Make and Model | Qty at DC | Qty at DR | Qty at NDR | Total Qty | 4th Year AMC Price | 5th Year AMC Price | GST% | Total Price with GST |
| 1 | TYPE -1 RISK/EPIC based Processor Enterprise Class Server with native operating system | | 4 | 4 | 0 | 8 | | | | |
| 2 | TYPE -2 RISK/EPIC based Processor Enterprise Class Server with native operating system | | 4 | 4 | 0 | 8 | | | | |
| 3 | TYPE -3 RISK/EPIC based Processor Mid -ranged RISK/EPIC based processor Server with native operating system | | 1 | 6 | 0 | 7 | | | | |
| 4 | Type 1 - x86 platform with Red Hat Linux 7.7 | | 14 | 14 | 0 | 28 | | | | |
| 5 | Type 2 - x86 platform with Red Hat Linux 7.7 | | 10 | 10 | 0 | 20 | | | | |
| 6 | Type 3 - x86 platform with Red Hat Linux 7.7 | | 2 | 2 | 0 | 4 | | | | |
| 7 | Type 4- x86 platform with Red Hat Linux 7.7 | | 4 | 4 | 0 | 8 | | | | |
| 8 | Type 5 - x86 platform with Red Hat Linux 7.7 | | 9 | 9 | 0 | 18 | | | | |
| 9 | Type 6 - x86 platform with Red Hat Linux 7.7 | | 3 | 17 | 0 | 20 | | | | |
| 10 | Type 7 - x86 platform with Red Hat Linux 7.7 | | 2 | 5 | 0 | 7 | | | | |

| | | | | | | | | | | |
|----------------------|---|--|--------------------|--------------------|--------------------|--------------------|--|--|--|--|
| 11 | Network Area Storage (NAS) all flash usable 10 TB | | 1 | 1 | 0 | 2 | | | | |
| 12 | All flash Enterprise Storage usable space 350 TB in RAID 6 | | 1 | 0 | 0 | 1 | | | | |
| 13 | All flash Enterprise Storage usable space 600 TB in RAID 6 | | 0 | 1 | 0 | 1 | | | | |
| 14 | All flash Enterprise Storage usable space 10TB in RAID 6 | | 0 | 0 | 1 | 1 | | | | |
| 15 | Disk Based Backup solution (150 TB usable) | | 1 | 1 | 0 | 2 | | | | |
| 16 | Enterprise class Tape Library with 100 no. LTO 7, 200 no. LTO 8 and 5 cleaning Tap | | 1 | 1 | 0 | 2 | | | | |
| 17 | 128 Port 16Gbps/32Gbps SAN director/Switch | | 2 | 2 | 0 | 4 | | | | |
| 18 | Load Balancer with Application Delivery controller (ADC)- Type1 for Production | | 1 pair | 1 pair | 0 | 2 pair | | | | |
| 19 | Load Balancer with Application Delivery controller (ADC)- Type2 for Production | | 3 pair | 3 pair | 0 | 6 pair | | | | |
| 20 | Load Balancer with Application Delivery controller (ADC)- Type2 for UAT | | 0 | 1 | 0 | 1 | | | | |
| 21 | Enterprise Management System (EMS) Tool Hardware | | As per requirement | As per requirement | NA | As per requirement | | | | |
| 22 | Any other Hardware required for implementation of deliverables as per SOW, Technical requirement mentioned in RFP and subsequent corrigendum/ addendums | | As per requirement | As per requirement | As per requirement | As per requirement | | | | |
| SUB TOTAL (C) | | | | | | | | | | |

D. Software ATS and Enterprise premium/Standard support Cost (2nd, 3rd 4th and 5th year)

| Sl. No. | Item Description | Make and Model | Qty | 2nd Year ATS | 3rd Year ATS | 4th Year ATS | 5th Year ATS | GST% | Total Price with GST |
|---------|---|----------------|--------------------|--------------|--------------|--------------|--------------|------|----------------------|
| 1 | DC, DR and NDR IT- infrastructure monitoring, reporting and Patch management device/server | | 500 | | | | | | |
| 2 | Network monitoring, reporting and configuration automation. | | 8000 | | | | | | |
| 3 | IT Service/ Helpdesk, call, Change Management, SLA management concurrent user | | 50 | | | | | | |
| 4 | Asset management. | | 8000 | | | | | | |
| 5 | Middleware monitoring (JBOSS) SPI | | 40 | | | | | | |
| 6 | Database monitoring | | 30 | | | | | | |
| 7 | Backup software (150 TB capacity-based backup) at DC | | 1 | | | | | | |
| 8 | Backup software (150 TB capacity-based backup) at DR | | 1 | | | | | | |
| 9 | Third-party software for Finacle 10.x: JBOSS EAP 7.1.2 (64 bit) with java-1.8.0-openjdk-1.8.0.191.b12-o.el6_10.x86_64 rpm with developer package for J2EE application Servers (24x7 Enterprise premium Support for DC and Standard Support for DR & UAT) | | As per requirement | | | | | | |
| 10 | Third-party software for Finacle 10.x: JBCS or Apache HTTP server version 2.4.23 with mod cluster 1.3.5 Final with software load balancer between web and J2EE layer from JBCS or Apache HTTP for Web Servers (24x7 Enterprise premium Support for DC and Standard Support for DR & UAT) | | As per requirement | | | | | | |
| 11 | Finacle 10.x & FEBA: RHEL & JBOSS, Subscription with RED Hat & JBOSS to gain access of respective tar/zip download and JAR/Library and GCC Compiler (24x7 Enterprise premium Support for DC and Standard Support for DR & UAT) | | As per requirement | | | | | | |
| 12 | Third-party software for FEBA & DEH: (24x7 Enterprise premium Support for DC and Standard Support for DR & UAT) | NA | NA | NA | NA | NA | NA | NA | NA |
| 12.1 | JRE 1.8 (DEH and Microservices for application server) | | As per requirement | | | | | | |
| 12.2 | JBOSS EAP 7.1.2 (J2EE Application Server) | | As per requirement | | | | | | |

| | | | | | | | | | |
|----------------------|--|--|--|--|--|--|--|--|--|
| 12.3 | Python 2.7 (Database Server DEH) | | As per requirement | | | | | | |
| 12.4 | JBCS or Apache httpd 2.4.23(Web Server) | | As per requirement | | | | | | |
| 12.5 | Redis Server 3.2 with Enterprise support (For distributed caching DEH and Microservices) | | 6 master instances 6 Slave instances 2 UAT instances | | | | | | |
| 12.6 | Node JS 8.9.4 (Omni Channel REST APIs with node js based O-Auth Provider Within Omni Channel) | | As per requirement | | | | | | |
| 12.7 | HA Proxy 1.8.3 (as webserver/load-balancer for servlet application and load-balancer for Rest APIs. Load balancer is mandatory for Rest APIs in OCH) | | As per requirement | | | | | | |
| 12.8 | Graylog 2.3.2 (consolidate logs for analysis) | | As per requirement | | | | | | |
| 13 | JRE 1.8 (For Client PC) | | 20 | | | | | | |
| 14 | JDK 1.8 (For Client PC) | | 20 | | | | | | |
| 15 | Any other software and OS required for implementation of deliverables as per SOW, Technical requirement mentioned in RFP and subsequent corrigendum/addendums. | | As per requirement | | | | | | |
| SUB TOTAL (D) | | | | | | | | | |

| E. Implementation, Performance, Automation, UAT & Migration testing and LTO 5 tape Migration cost | | | | | | |
|--|---|------------|-------------------|-------------|-----------------------------|--|
| Sl. No. | Item Description | Qty | Unit Price | GST% | Total Price with GST | |
| 1 | One Time Implementation Cost (DC) for 1 st PO: Finacle 10.x related Hardware | 1 | | | | |
| 2 | One Time Implementation Cost (DR) for 1 st PO: Finacle 10.x related Hardware | 1 | | | | |
| 3 | One Time Implementation Cost (NDR) | 1 | | | | |
| 4 | One Time Implementation Cost (DC) for 4 th PO: FEBA related hardware | 1 | | | | |
| 5 | One Time Implementation Cost (DR) for 4 th PO: FEBA related | 1 | | | | |

| | | | | | |
|----------------------|---|-----|--|--|--|
| | hardware | | | | |
| 6 | Onetime Implementation cost EMS tool | 1 | | | |
| 7 | Finacle 10.x One-time Third-party Performance testing, Automation implementation, UAT, Functional testing, security & Migration testing cost and Benchmarking testing | 1 | | | |
| 8 | FEBA UAT, Functional testing, security & Migration testing cost | 1 | | | |
| 9 | Existing LTO 5 tape Migration | 500 | | | |
| 10 | Finacle10.x RAC implementation, support for single byte to multibyte conversion of Finacle 7.x database and Data migration at DC, DR and UAT | 1 | | | |
| 11 | FEBA+DEH and FAS RAC implementation, support for Data migration at DC, DR and UAT | 1 | | | |
| SUB TOTAL (E) | | | | | |

F. Facility Management cost at DC, DR and NDR (Hardware, Software, OS, Backup, DBs, EMS tools) for 5 years

| Sl. No. | Item Description | Qty | Unit Price | GST% | Total Price with GST |
|----------------------|-----------------------------------|-----|------------|------|----------------------|
| 1 | Facility Management Cost 1st year | | | | |
| 2 | Facility Management Cost 2nd year | | | | |
| 3 | Facility Management Cost 3rd year | | | | |
| 4 | Facility Management Cost 4th year | | | | |
| 5 | Facility Management Cost 5th year | | | | |
| SUB TOTAL (F) | | | | | |

G. Application Support -L1 and L2

G1.L2 Application Support - Finacle 10.x (Domestic and overseas)

| Sl. No. | Item Description | Qty | Unit Price | GST% | Total Price With GST |
|---------|------------------|-----|------------|------|----------------------|
|---------|------------------|-----|------------|------|----------------------|

| | | | | | |
|---|------------------------------------|------------|-------------------|-------------|-----------------------------|
| 1 | 1st year L2 support cost | | | | |
| 2 | 2nd year L2 support cost | | | | |
| SUB TOTAL (G1) | | | | | |
| G2.L1 Application Support - Finacle 10.x (Domestic and overseas) | | | | | |
| Sl. No. | Item Description | Qty | Unit Price | GST% | Total Price With GST |
| 1 | 1st year L1 help desk support cost | 20 | | | |
| SUB TOTAL (G2) | | | | | |
| G3.L2 Application Support - FEBA +DEH+FAS | | | | | |
| Sl. No. | Item Description | Qty | Unit Price | GST% | Total Price With GST |
| 1 | 1st year L2 support cost | | | | |
| 2 | 2nd year L2 support cost | | | | |
| SUB TOTAL (G3) | | | | | |
| SUB TOTAL G (G1+G2+G3) | | | | | |

| H. Phase wise upgradation cost for Server, Storage & Backup solution including implementation cost during contract period on requirement basis | | | | | | | |
|---|---|---------------|---------------|------------------|-------------------|-------------|-----------------------------|
| Sl. No. | Item Description | DC Qty | DR Qty | Total Qty | Unit Price | GST% | Total Price with GST |
| 1 | **Phase 1 upgrade with 3 years warranty: TYPE 1 RISK/EPIC server per node Database server for Finacle 10.x IBM: Core 6/ RAM 96 GB Oracle: Core 8/RAM 96 GB HPE: Core 12/ RAM 96 GB | 4 | 4 | 8 | | | |
| 2 | **Phase 2 upgrade with 3 years warranty: TYPE 1 RISK/EPIC server per node Database server for Finacle 10.x IBM: Core 12/ RAM 144 GB Oracle: Core 14/RAM 144 GB HPE: Core 12/ RAM 144 GB | 4 | 4 | 8 | | | |

| | | | | | | | |
|----------------------|---|--------|--------|--------|--|--|--|
| 3 | **Phase 1 upgrade with 3 years warranty: TYPE 2 RISK/EPIC server per node Database server for REPORT/MIS/CSIS IBM: Core 8/ RAM 72 GB Oracle: Core 9/RAM 72 GB HPE: Core 12/ RAM 72 GB | 4 | 4 | 8 | | | |
| 4 | **Phase 2 upgrade with 3 years warranty: TYPE 2 RISK/EPIC per node Database server for REPORT/MIS/CSIS IBM: Core 12/ RAM 108 GB Oracle: Core 13/RAM 108 GB HPE: Core 14 / RAM 108 GB | 4 | 4 | 8 | | | |
| 5 | **Phase 1 upgrade with 3 years warranty: Storage during contract period (All Flash usable in RAID 6) | 125 TB | 210 TB | 335 TB | | | |
| 6 | **Phase 2 upgrade with 3 years warranty: Storage during contract period (All Flash usable in RAID 6) | 150 TB | 250 TB | 400 TB | | | |
| 7 | **Phase 1 Upgrade with 3 years warranty: Storage Coach Memory by 1 TB (From 2 TB to 3 TB) | 1 TB | 1 TB | 2 TB | | | |
| 8 | **Phase 2 Upgrade with 3 years warranty: Storage Coach Memory by 1 TB (From 3 TB to 4 TB) | 1 TB | 1 TB | 2 TB | | | |
| 9 | *Phase 1 Upgrade with 1 years ATS: Capacity base backup software upgrade during contract period | 50 TB | 50 TB | 100 TB | | | |
| 10 | **Phase 1 Upgrade with 3 years warranty Disk base backup | 50 TB | 50 TB | 100 TB | | | |
| 11 | **Phase 2 Upgrade with 1 years ATS: Capacity base backup software upgrade during contract period | 50 TB | 50 TB | 100 TB | | | |
| 12 | **Phase 2 Upgrade with 3 years warranty Disk base backup | 50 TB | 50 TB | 100 TB | | | |
| SUB TOTAL (H) | | | | | | | |

**** In addition to above upgrade, bank reserves the right to further upgrade Server, storage & backup solution during contract period by repeating upgrade purchase order (Phase 1 & Phase 2) with same quantity & cost as per requirement during contract period.**

| I. Customization Man days cost on requirement basis | | | | | |
|--|--|----------------|------------|------|----------------------|
| Sl. No. | Item Description | Qty (Man days) | Unit Price | GST% | Total Price With GST |
| 1 | Customization in Finacle 10.x and FEBA including DEH | 2000 | | | |
| SUB TOTAL (I) | | | | | |

| Summary Sheet | | |
|--|--|----------------|
| Sl. No. | Item Description | Price with GST |
| 1 | A. Hardware Cost with 3 years warranty (A) | |
| 2 | B. Software/Application/Solution Cost with 1 year Enterprise Primum/standard support (B) | |
| 3 | C. 4th and 5th Year Comprehensive AMC Cost for Hardware (C) | |
| 4 | D. Software ATS and Enterprise premium/standard support Cost (2nd ,3rd 4th and 5th year) (D) | |
| 5 | E. Implementation, Performance, Automation, UAT & Migration testing and LTO 5 tape Migration cost (E) | |
| 6 | F. Facility Management cost at DC, DR and NDR (Hardware, Software, OS, Backup, DBs, EMS tools) for 5 years (F) | |
| 7 | G. Application Support - L1 & L2 (G) | |
| 8 | H. Phase wise upgradation cost for Server, Storage & Backup solution including implementation cost during contract period on requirement basis (H) | |
| 9 | I. Customization Man days cost on requirement basis (I) | |
| Total Cost of Ownership [A+B+C+D+E +F+G+H+I] (in figures) | | |
| Total Cost of Ownership [A+B+C+D+E +F+G+H+I] (in words) | | |

Note:

- The calculation for arriving at TCO is properly mentioned in the appropriate columns and we confirm that the above-mentioned rates are accurate. In case of any anomalies in the calculation for arriving at TCO, the Bank will have the right to rectify the same and it will be binding upon our company.
- If the cost for any line item is indicated as zero or blank then Bank may assume that the said item is provided to the Bank without any cost.
- Bank has discretion to keep any of the line item mentioned above as optional as per Bank's requirement.
- We have ensured that the price information is filled in the Commercial Offer at appropriate column without any typographical or arithmetic errors. All fields have been filled in correctly.
- We have not added or modified any clauses/ statements/ recordings/ declarations in the commercial offer, which is conditional and/or qualified or subjected to suggestions.
- We have not added or modified any clauses/ statements/ recordings/ declarations in the commercial offer, which contain any deviation in terms & conditions or any specification.
- We have understood that in case of non-adherence to any of the above, our offer will be summarily rejected.

- h. In case of any discrepancy between figures and words, the amount in words shall prevail.
- i. Please note that any Commercial offer which is conditional and/ or qualified or subjected to suggestions will also be summarily rejected. This offer shall not contain any deviation in terms & condition or any specifications, if so such offer will be summarily rejected.
- j. All prices should be quoted in (INR) only.
- k. **Bidder needs to submit mask commercial BOM mentioning make, model and part code no. along with Technical bid.**
- l. The TCO (Total cost of ownership) will be exclusive of GST and other applicable taxes. However the GST and other applicable taxes will be paid as per actuals.
- m. **The quantity mentioned above is only indicative and may change at the time of issuance of Purchase Order to the selected bidder.**

Place:

Signature of Bidder: _____

Date:

Name: _____

Business Address: _____

Eligibility Criteria Compliance

| Sl. No. | Eligibility Criteria | (Proof of documents required / must be submitted) | Compliance (Yes/No) |
|---------|--|--|---------------------|
| 1 | The Bidder should be a registered company in India as per Companies Act 1956 / 2013 and must be in existence for the last 5 years as on the date of RFP. | The Certificate of Incorporation & commencement of Business (whichever is applicable) issued by Registrar of Companies along with the copies of Memorandum and Articles of Association are required to be submitted along with the eligibility bid. | |
| 2 | The bidder must have minimum annual turnover of Rs. 500 crore each in last three financial years i.e. 2016-17, 2017-18 & 2018-19. This must be the individual company turnover and not that of any group of companies. | Copy of Audited Balance sheet for the financial years i.e. 2016-17, 2017-18 & 2018-19 should be submitted. Also a Certificate signed by the Chartered Accountants regarding company's financial capability to be submitted. | |
| 3 | The Bidder should have operating Profit in the last three financial years (2016-17, 2017-18 & 2018-19). | Copy of Audited balance sheet of the financial years i.e. 2016-17, 2017-18 & 2018-19 should be submitted. | |
| 4 | The bidder should be Original Equipment Manufacturer (OEM) of Hardware or their authorized representative / System Integrator (SI) in India. | The bidder needs to submit Manufacturer Authorization Form (MAF), having reference of this RFP, from respective OEMs as per Annexure-C stating that bidder is authorized partner/ System Integrator of OEM and is authorized to participate in this RFP. In case of OEM, self-declaration on Company Letter Head as per Annexure-C format duly signed & stamped to be submitted. | |
| 5. | Proposed OEMs product on | Copy of purchase order and | |

| | | | |
|----|--|--|--|
| | (RISC/EPIC) based Enterprise Class server, Enterprise Class Storage, Tape Library, backup solution and Unix Operating System (AIX/Solaris/HP Unix) should have been supplied, integrated and running as on date in at least one Public/Private Sector Banks in Core Banking environment with Finacle in India. | reference letters/ completion certificates to be enclosed containing contact details of the signing authority of the masked purchase order / authorization letter. | |
| 6. | Proposed x86 Enterprise Class Server OEM should have installation base in at least one Govt organization/PSU in India having minimum 40 nos. of x86 Enterprise Class Servers with minimum 400 cores with Red hat Linux Operating System and running successfully on Critical OLTP application last 3 years as on date submission of RFP. | Copy of purchase order and reference letters/ completion certificates mentioning details of hardware used along with details of Critical OLTP system running to be enclosed containing contact details of the signing authority of the masked purchase order / authorization letter. | |
| 7 | Proposed OEMs for disk-based backup solution, load balancer, SAN switch, NAS and Enterprise Management System (EMS) Tool should have been supplied, integrated and running successfully as on date in at least one BFSI in India. | Copy of purchase order and reference letters/ completion certificates to be enclosed containing contact details of the signing authority of the masked purchase order / authorization letter. | |
| 8. | The proposed OEMs hardware/software like servers, storage, load balancer, SAN switch/director, and backup solution, NAS, operating system, EMS Tool, operating system and any other license software required for implementation of Finacle 10.x & FEBA should have a clear support roadmap for minimum Seven (7) years from date of submission of RFP and upgrades (if required) must be made available during the contract period. | A written confirmation to be provided from the OEM on OEM's letterhead (signed & stamped by OEM) as per Annexure-C | |

| | | | |
|-----|--|--|--|
| 9. | <p>The bidder should have experience in delivery, integration, installation, management and maintenance of Core Banking Solution & Infrastructure in at least one in Public / Private Sector Bank(s) in India having more than 1000 branches operation during last 10 years along with the following areas of Banking setup:</p> <p>a) IT Infrastructure like Management of Servers, Storage, SAN Switch, Backup solution.</p> <p>b) Database & Operating System administration & management</p> | <p>A copy of Purchase Order and the necessary experience certificate along with reference letter having delivery, integration, installation, management and maintenance of Server Infrastructure experience in Public / Private Sector Bank to be enclosed with the bid documents.</p> | |
| 10. | <p>Bidder should have a tie-up arrangement with external agencies (Maximum two agencies) having experience in below mentioned area for Finacle 10.x migration in Public / Private Sector Bank(s) in India having more than 1000 branches</p> <p>a. Functional Testing & UAT of all modules, Interface & automation experience</p> <p>b. Security testing</p> <p>c. Performance Testing</p> <p>d. Pre and post Data Migration checking & testing</p> | <p>Relevant Credential letters having name of proposed testing agency along with Purchase Order, Contract Copy with the Bank's confirmation on having executed the PO/Contract having name of proposed testing agency.</p> | |
| 11. | <p>The Bidder/OEM should have offices in Kolkata and Bengaluru for after sale support and maintenance of offered hardware and software.</p> | <p>List of branch / support offices full details of Name, Address / Telephone Numbers on the company's letter head should be submitted.</p> | |
| 12. | <p>Bidder and OEM should not have been black-listed by any Public sector bank / government institution in India as on RFP date.</p> | <p>An undertaking to this effect must be submitted in their respective letter head.</p> | |

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| <p>Note: - In this tender process, either authorized representative / distributor in India on behalf of Principal OEM (Original Equipment Manufacturer) or Principal OEM itself can bid but both cannot bid simultaneously. In such case OEM bid will only be accepted. If an agent / distributor submits bid on behalf of the Principal OEM, the same agent / distributor shall not submit a bid on behalf of another Principal OEM in the same tender for the same item or product. Bank right to verify the credential letter submitted by bidder directly from respective client. Credential letter should be undersigned with the rank of DGM/VP or above.</p> | |
|--|--|



PROFORMA FOR PERFORMANCE GUARANTEE**(To be stamped in accordance with the stamp act)**

1. In consideration of UCO BANK, a body corporate constituted under the Banking Companies (Acquisition & Transfer of Undertaking) Act, 1970, having its head office at 10 BIPLABI TRILOKYA MAHARAJ SARANI (BRABOURNE ROAD), Kolkata-700001 (hereinafter called "UCO BANK") having agreed to exempt M/s (Name of the bidder Company) a Company incorporated under the Companies Act, 1956 having its registered office at (Address of the bidder company) (hereinafter called "the said BIDDER") from the demand, under the terms and conditions of UCO BANK's purchase order/ Letter of Intent bearing no.dated..... issued to the Bidder and an Agreement to be made between UCO Bank and the Bidder for a period of In pursuance of Request For Proposal no.....dated....., as modified, (hereinafter called "the said Agreement"), of security deposit for the due fulfillment by the said BIDDER of the Terms and conditions contained in the said Agreement, on production of a Bank Guarantee for Rs..... (Rupees..... Only).

We, [indicate the name of the bank ISSUING THE BANK GUARANTEE] (hereinafter referred to as "the Bank") at the request of [BIDDER] do hereby undertake to pay to UCO BANK an amount not exceeding Rs.....against any loss or damage caused to or suffered or would be caused to or suffered by UCO BANK by reason of any breach by the said BIDDER of any of the terms or conditions contained in the said Agreement.

2. We [indicate the name of the bank ISSUING THE BANK GUARANTEE] do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from UCO BANK stating that the amount claimed is due by way of loss or damage caused to or breach by the said BIDDER of any of the terms or conditions contained in the said Agreement or by reason of the BIDDER'S failure to perform the said Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs.....

3. We undertake to pay to UCO BANK any money so demanded notwithstanding any dispute or disputes raised by the BIDDER in any suit or proceeding pending before any court or Tribunal relating thereto our liability under this present being absolute and unequivocal.

The payment as made by us under this bond shall be a valid discharge of our liability for payment there under and the BIDDER for payment there under and the BIDDER shall have no claim against us for making such payment.

4. We [indicate the name of the bank ISSUING THE GUARANTEE] further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of BANK under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till UCO BANK certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said BIDDER and accordingly discharged this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before (Expiry of claim period), we shall be discharged from all liabilities under this guarantee thereafter.

5. We [indicate the name of bank ISSUING THE GUARANTEE] further agree with UCO BANK that UCO BANK shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend time of performance by the said BIDDER from time or to postpone for any time, or from time to time any of the powers exercisable by UCO BANK against the said BIDDER and to forebear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any variation, or extension being granted to the said BIDDER or for any forbearance, act or omission on the part of UCO BANK of any indulgence by UCO BANK to the said BIDDER or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the constitution of the Bank or the BIDDER.

7. We [Indicate the name of Bank ISSUING THE GUARANTEE] lastly undertake not to revoke this guarantee during its currency except with the previous consent of UCO BANK in writing.

Notwithstanding anything contained herein:

i) Our liability under this Bank Guarantee shall not exceed Rs..... (Rupees.....) only.

ii) This Bank Guarantee shall be valid upto and

iii) 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(date of expiry of Guarantee including claim period).

8. Dated the day of for..... [indicate the name of Bank]

Yours' faithfully,

For and on behalf of

_____ Bank.

Authorized Official.

NOTE:

1. Selected bidder should ensure that the seal and CODE No. of the signatory is put by the bankers, before submission of the bank guarantee.
2. Bidder guarantee issued by banks located in India shall be on a Non-Judicial Stamp Paper of requisite value as applicable to the place of execution.



PRE CONTRACT INTEGRITY PACT

(To be stamped as per the Stamp Law of the Respective State)

1. Whereas UCO Bank having its registered office at UCO BANK, a body corporate constituted under The Banking companies (Acquisition & Transfer Act of 1970), as amended by The Banking Laws (Amendment) Act, 1985, having its Head Office at 10, Biplabi Trailokya Maharaj Sarani, Kolkata-700001 acting through its Department of IT, represented by Authorised Signatory hereinafter referred to as the Buyer and the first party, proposes to procure (for Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software, Facility Management Services for Finacle Core Banking (Version 10.x) and E-Banking (FEBA) at DC, DR and Near DR Site) hereinafter referred to as Stores and / or Services.

And

M/s _____ represented by _____ Authorised signatory, (which term, unless expressly indicated by the contract, shall be deemed to include its successors and its assignee), hereinafter referred to as the bidder/seller and the second party, is willing to offer/has offered the Stores and / or Services.

2. Whereas the Bidder/Seller is a private company/public company/partnership/registered export agency, constituted in accordance with the relevant law in the matter and the BUYER is a Public Sector Undertaking and registered under Companies Act 1956. Buyer and Bidder/Seller shall hereinafter be individually referred to as —Party or collectively as the —parties, as the context may require.



3. Preamble

Buyer has called for tenders under laid down organizational procedures intending to enter into contract /s for supply / purchase / etc. of **Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software, Facility Management Services for Finacle Core Banking (Version 10.x) and E-Banking (FEBA) at DC, DR and Near DR Site (Re-tendering)** and the Bidder /Seller is one amongst several bidders /Proprietary Bidder /Customer Nominated Source/Licenser who has indicated a desire to bid/supply in such tendering process. The Buyer values and takes primary responsibility for values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness / transparency in its relations with its Bidder (s) and / or Seller(s).

In order to achieve these goals, the Buyer will appoint Independent External Monitor(s) (IEM) in consultation with Central Vigilance Commission, who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

4. Commitments of the Buyer

4.1 The Buyer commits itself to take all measures necessary to prevent corruption and fraudulent practices and to observe the following principles:-

- (i) No employee of the Buyer, personally or through family members, will in connection with the tender, or the execution of a contract demand, take a

promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

- (ii) The Buyer will during the tender process treat all Bidder(s) /Seller(s) with equity and reason. The Buyer will in particular, before and during the tender process, provide to all Bidder (s) /Seller(s) the same information and will not provide to any Bidders(s) /Seller(s) confidential /additional information through which the Bidder(s) / Seller(s) could obtain an advantage in relation to the process or the contract execution.
- (iii) The Buyer will exclude from the process all known prejudiced persons.

4.2 If the Buyer obtains information on the conduct of any of its employees which is a criminal offence under the Indian Legislation Prevention of Corruption Act 1988 as amended from time to time or if there be a substantive suspicion in this regard, the Buyer will inform to its Chief Vigilance Officer and in addition can initiate disciplinary action.

5. Commitments of the Bidder(s) /Seller(s):

5.1 The Bidder(s)/ Seller(s) commit itself to take necessary measures to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.

- (i) The Bidder(s) /Seller(s) will not directly or through any other persons or firm, offer promise or give to any of the Buyer's employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he / she is not legally entitled to, in order to obtain in exchange any advantage during the tendering or qualification process or during the execution of the contract.
- (ii) The Bidder(s) /Seller(s) will not enter with other Bidders / Sellers into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
- (iii) The bidder(s) /Seller(s) will not commit any offence under the Indian legislation, Prevention of Corruption Act, 1988 as amended from time to time. Further, the Bidder(s) /Seller(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Buyer as part of the business relationship, regarding plans, technical proposals and business details, including information constrained or transmitted electronically.

5.2 The Bidder(s) /Seller(s) shall ensure compliance of the provisions of this Integrity Pact by its sub-supplier(s) / sub-contractor(s), if any, Further, the Bidder /Seller shall be held responsible for any violation /breach of the provisions by its sub-supplier(s) /sub-contractor(s).

5.3 The Bidder(s) /Seller(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

5.4 Agents / Agency Commission

The Bidder /Seller confirms and declares to the Buyer that the bidder/Seller is the original manufacturer/authorized distributor / stockiest of original manufacturer or

Govt. Sponsored /Designated Export Agencies (applicable in case of countries where domestic laws do not permit direct export by OEMS of the stores and /or Services referred to in this tender / Offer / contract / Purchase Order and has not engaged any individual or firm, whether Indian or Foreign whatsoever, to intercede, facilitate or in any way to recommend to Buyer or any of its functionaries, whether officially or unofficially, to the award of the tender / contract / Purchase order to the Seller/Bidder; nor has any amount been paid, promised or intended to be paid to any such individual or firm in respect of any such intercession, facilitation or recommendation. The Seller / Bidder agrees that if it is established at any time to the satisfaction of the Buyer that the present declaration is in anyway incorrect or if at a later stage it is discovered by the Buyer that the Seller incorrect or if at a later stage it is discovered by the Buyer that the Seller/Bidder has engaged any such individual /firm, and paid or intended to pay any amount, gift, reward, fees, commission or consideration to such person, party, firm or institution, whether before or after the signing of this contract /Purchase order, the Seller /Bidder will be liable to refund that amount to the Buyer. The Seller will also be debarred from participating in any RFP / Tender for new projects / program with Buyer for a minimum period of five years. The Buyer will also have a right to consider cancellation of the Contract / Purchase order either wholly or in part, without any entitlement of compensation to the Seller /Bidder who shall in such event be liable to refund agents / agency commission payments to the buyer made by the Seller /Bidder along with interest at the rate of 2% per annum above LIBOR (London Inter -Bank Offer Rate) (for foreign bidders) and Base Rate of SBI (State Bank of India) plus 2% (for Indian bidders). The Buyer will also have the right to recover any such amount from any contracts / Purchase order concluded earlier or later with Buyer.



6. Previous Transgression

- 6.1** The Bidder /Seller declares that no previous transgressions have occurred in the last three years from the date of signing of this Integrity Pact with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify Bidder's /Seller's exclusion from the tender process.
- 6.2** If the Bidder /Seller makes incorrect statement on this subject, Bidder /Seller can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason without any liability whatsoever on the Buyer.

7. Company Code of Conduct

Bidders /Sellers are also advised to have a company code of conduct (clearly rejecting the use of bribes and other unethical behaviour) and a compliance program for the implementation of the code of conduct throughout the company.

8. Sanctions for Violation

- 8.1** If the Bidder(s) /Seller(s), before award or during execution has committed a transgression through a violation of Clause 5, above or in any other form such as to put his reliability or credibility in question, the Buyer is entitled to disqualify the Bidder(s) /Seller (s) from the tender process or take action as per the procedure mentioned herein below:

- (i) To disqualify the Bidder /Seller with the tender process and exclusion from future contracts.
- (ii) To debar the Bidder /Seller from entering into any bid from Buyer for a period of two years.
- (iii) To immediately cancel the contract, if already signed /awarded without any liability on the Buyer to compensate the Bidder /Seller for damages, if any. Subject to Clause 5, any lawful payment due to the Bidder/Seller for supplies effected till date of termination would be made in normal course.
- (iv) To encash EMD /Advance Bank Guarantees / Performance Bonds / Warranty Bonds, etc. which may have been furnished by the Bidder /Seller to the extent of the undelivered Stores and / or Services.

8.2 If the Buyer obtains Knowledge of conduct of Bidder /Seller or of an employee or representative or an associate of Bidder /Seller which constitutes corruption, or if the Buyer has substantive suspicion in this regard, the Buyer will inform to its Chief Vigilance Officer.

9. Compensation for Damages

- 9.1** If the Buyer has disqualified the Bidder(s) /Seller(s) from the tender process prior to the award according to Clause 8, the Buyer is entitled to demand and recover the damages equivalent to Earnest Money Deposit in case of open tendering.
- 9.2** If the Buyer has terminated the contract according to Clause 8, or if the Buyer is entitled to terminate the contract according to Clause 8, the Buyer shall be entitled to encash the advance bank guarantee and performance bond / warranty bond, if furnished by the Bidder / Seller, in order to recover the payments, already made by the Buyer for undelivered Stores and / or Services.

10. Independent External Monitor(s)

- 10.1** The Buyer has appointed independent External Monitors for this Integrity Pact in consultation with the Central Vigilance Commission (Names and Addresses of the Monitors are given in RFP).
- 10.2** As soon as the integrity Pact is signed, the Buyer shall provide a copy thereof, along with a brief background of the case to the independent External Monitors.
- 10.3** The Bidder(s) / Seller(s) if they deem it necessary, May furnish any information as relevant to their bid to the Independent External Monitors.
- 10.4** If any complaint with regard to violation of the IP is received by the buyer in a procurement case, the buyer shall refer the complaint to the Independent External Monitors for their comments / enquiry.
- 10.5** If the Independent External Monitors need to peruse the records of the buyer in connection with the complaint sent to them by the buyer, the buyer shall make arrangement for such perusal of records by the independent External Monitors.
- 10.6** The report of enquiry, if any, made by the Independent External Monitors shall be submitted to MD & CEO, UCO Bank, Head Office at 10, Biplabi Trailokya Maharaj Sarani , Kolkata-700001 within 2 weeks, for a final and appropriate decision in the matter keeping in view the provision of this Integrity Pact.
- 10.7** The word "Monitor" would include both singular and plural.

11. Law and Place of Jurisdiction

This Integrity Pact is subject to Indian Laws, and exclusive Jurisdiction of Courts at Kolkata, India.

12. Other Legal Actions

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provision of the extant law in force relating to any civil or criminal proceedings.

13. Integrity Pact Duration.

- 13.1** This Integrity Pact begins when both parties have legally signed it. It expires of order / finalization of contract.
- 13.2** If any claim is made/ lodged during this time, the same shall be binding and continue to be valid despite the lapse of this Integrity Pact as specified above, unless it is discharged / determined by MD & CEO, UCO Bank .
- 13.3** Should one or several provisions of this Integrity Pact turn out to be invalid, the reminder of this Integrity Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

14 Other Provisions

- 14.1** Changes and supplements need to be made in writing. Side agreements have not been made.
- 14.2** The Bidders (s)/ Sellers (s) signing this IP shall not initiate any Legal action or approach any court of law during the examination of any allegations/complaint by IEM and until the IEM delivers its report.
- 14.3** In view of nature of this Integrity Pact, this Integrity Pact shall not be terminated by any party and will subsist throughout its stated period.
- 14.4** Nothing contained in this Integrity Pact shall be deemed to assure the bidder / Seller of any success or otherwise in the tendering process.
- 15.** This Integrity Pact is signed with UCO Bank exclusively and hence shall not be treated as precedence for signing of IP with MoD or any other Organization.
- 16.** In the event of any contradiction between the Integrity Pact and its Annexure, the Clause in the Integrity Pact will prevail.
- 17.** The Parties here by sign this Integrity Pact at _____ on _____ (Seller/Bidder) and at _____ on _____ (Buyer)

BUYER

Signature:
Authorized Signatory
UCO Bank
Department of IT

Place:
Date:

Witness:
(Name & Address)

BIDDER /SELLER

Signature:
Authorized Signatory

Witness:
(Name & Address)

Format of Pre-Bid Queries to be submitted by the Bidder(s)

Name of the Bidder:

Name of the Contact Person of the Bidder:

Contact Number of the Contact Person:

Email id of the Contact Person:

| Sl. No. | RFP Page No. | RFP Clause No. | Original RFP Clause | Subject/Description | Query sought/Suggestions of the Bidder |
|---------|--------------|----------------|---------------------|---------------------|--|
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Format of Bank Guarantee (EMD)

To

The Deputy General Manager

DIT, BPR & BTD

UCO Bank, Head Office

5th Floor, 3&4, DD Block, Sector-I

Salt Lake, Kolkata -700064

Dear Sir,

In response to your invitation to respond to your RFP for Selection of System Integrator (SI) for Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software, Facility Management Services for Finacle Core Banking (Version 10.x) and E-Banking (FEBA) at DC, DR and Near DR Site (Re-tendering), M/s _____ having their registered office at _____ hereinafter called the 'Bidder') wish to respond to the said Request for Proposal (RFP) and submit the proposal for Selection of System Integrator (SI) for Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software, Facility Management Services for Finacle Core Banking (Version 10.x) and E-Banking (FEBA) at DC, DR and Near DR Site.



Whereas the 'Bidder' has submitted the proposal in response to RFP, we, the _____ Bank having our Head Office _____ hereby irrevocably guarantee an amount of **Rs. 1 Cores (Rupees One Core Only)** as bid security as required to be submitted by the 'Bidder' as a condition for participation in the said process of RFP.

The Bid security for which this guarantee is given is liable to be enforced/ invoked:

1. If the Bidder withdraws his proposal during the period of the proposal validity; or
2. If the Bidder, having been notified of the acceptance of its proposal by the Bank during the period of the validity of the proposal fails or refuses to enter into the contract in accordance with the Terms and Conditions of the RFP or the terms and conditions mutually agreed subsequently.

We undertake to pay immediately on demand to UCO BANK the said amount of Rupees Twenty Lacs without any reservation, protest, demur, or recourse. The said guarantee is liable to be invoked/ enforced on the happening of the contingencies as mentioned above and also in the RFP document and we shall pay the amount on any Demand made by UCO BANK which shall be conclusive and binding on us irrespective of any dispute or difference raised by the Bidder.

Notwithstanding anything contained herein:

1. Our liability under this Bank guarantee shall not exceed Rs.1.00 Cr. only (Rupees One Crore Only).
2. This Bank guarantee will be valid upto_____; and
3. We are liable to pay the guarantee amount or any part thereof under this Bank guarantee only upon service of a written claim or demand by you on or before_____.

In witness whereof the Bank, through the authorized officer has sets its hand and stamp on this _____day of _____at _____.

Yours faithfully,

For and on behalf of

_____ Bank

Authorised Official

Note: This guarantee will require stamp duty as applicable and shall be signed by the official whose signature and authority shall be verified. The signatory shall affix his signature, name and designation.

(The value of the stamp paper will be as applicable at the place of issuing of Bank Guarantee.)

यूको बैंक UCO BANK

Undertaking for Non-Blacklisting / Non-Debarment of the bidder

To
The Deputy General Manager
DIT, BPR & BTD
UCO Bank, Head Office
5th Floor, 3&4, DD Block, Sector-I
Salt Lake, Kolkata -700064.

Dear Sir(s),

Sub: Request for Proposal (RFP) for “Selection of System Integrator (SI) for Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software, Facility Management Services for Finacle Core Banking (Version 10.x) and E-Banking (FEBA) at DC, DR and Near DR Site (Re-tendering)” vide “RFP Ref No: DIT/BPR&BTD/OA/246/2020-21 Date-18/05/2020.”

- a. We M/s _____, the undersigned hereby confirm that we have read and understood the eligibility criteria and fulfil the same.
- b. We further confirm that all the information as per requirement of the Bank have been included in our bid.
- c. Further we hereby undertake and agree to abide by all terms and conditions and guidelines stipulated by the Bank. We understand that any deviation may result in disqualification of our bid.
- d. We have not been blacklisted by any Nationalized Bank/RBI/IBA or any other Government agency/ICAI. No legal action is pending against us for any cause in any legal jurisdiction.
- e. We undertake that adequate number of resources, if required by the Bank, will be deployed for the project to complete the assignment within stipulated time.
- f. (Deviation to the above if any, the Bidder must provide details of such action(s)

1.

2.

(Signature and the capacity of the person duly authorized to sign the bid for and on behalf of)

Undertaking to abide by all By-Laws / Rules / Regulations

(TO BE EXECUTED ON NON-JUDICIAL STAMP PAPER OF REQUISITE VALUE)

To

The Deputy General Manager

DIT, BPR & BTD

UCO Bank, Head Office

5th Floor, 3&4, DD Block, Sector-I

Salt Lake, Kolkata -700064

Sub: Declaration-Cum-Undertaking regarding compliance with all statutory requirements

In consideration of UCO Bank, a body corporate, constituted under Banking Companies (Acquisition & Transfer of Undertakings) Act, 1970 as amended from time to time having its Head Office at 10, Biplabi Trailokya Maharaj Sarani, Kolkata-700001. (hereinafter referred to as "Bank" which expression shall include its successors and assigns), we, M/s....., having its Registered Office at....., do hereby, having examined the **RFP for UCO Bank for Selection of System Integrator (SI) for Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software, Facility Management Services for Finacle Core Banking (Version 10.x) and E-Banking (FEBA) at DC, DR and Near DR Site (Re-tendering) with RFP REF NO: DIT/BPR&BTD/OA/246/2020-21 Date-18/05/2020** including all Annexure, confirm and agree to comply with all Laws, Rules, Regulations, Bye-Laws, Guidelines, Notifications etc.

We do also hereby irrevocably and unconditionally agree and undertake to save and keep the Bank, including its respective directors, officers, and employees and keep them harmless from and against any claim, demand, losses, liabilities or expenses of any nature and kind whatsoever and any damage caused from and against all suits and other actions that may be instituted taken or preferred against the Bank by whomsoever and all losses, damages, costs, charges and expenses arising out of non-compliance with or non-adherence to any statutory/regulatory requirements and/or any other law for the time being in force.

Dated this _____ day of _____, 20 _____.

Place:

For M/s.

.....

[Seal and Signature(s) of the Authorized Signatory (s)]

Undertaking by the bidder

**To
The Deputy General Manager
DIT, BPR & BTD
Bank, Head Office
5th Floor, 3&4, DD Block, Sector-I
Salt Lake, Kolkata -700064**

Dear Sir,

Sub: RFP for UCO Bank for Selection of System Integrator (SI) for Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software, Facility Management Services for Finacle Core Banking (Version 10.x) and E-Banking (FEBA) at DC, DR and Near DR Site (Re-tendering) vide RFP Ref. No DIT/BPR&BTD/OA/246/2020-21 Date-18/05/2020)

We submit our Bid Document herewith.

We understand that Bank is not bound to accept the lowest or any bid received and Bank may reject all or any bid. We shall keep the price valid for the entire contract period from the date of issuance of the first Purchase Order.

If our bid is accepted, we are responsible for the due performance as per the scope of work and terms & conditions as per mentioned in RFP.

Yours faithfully,

For.....

(Signature and seal of authorized person)

Place:

Date:

Undertaking Letter to the Bank on the Bidder's Letterhead

**To
The Deputy General Manager
DIT, BPR & BTD
UCO Bank, Head Office
5th Floor, 3&4, DD Block, Sector-I
Salt Lake, Kolkata -700064**

Dear Sir,

Sub: RFP for Selection of System Integrator (SI) for Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software, Facility Management Services for Finacle Core Banking (Version 10.x) and E-Banking (FEBA) at DC, DR and Near DR Site (Re-tendering) vide RFP Ref. No DIT/BPR&BTD/OA/246/2020-21 Date-18/05/2020)

Further to our proposal dated, in response to the Request for Proposal (Bank's tender No. hereinafter referred to as "RFP") issued by Bank, we hereby covenant, warrant and confirm as follows:

We hereby agree to comply with all scope of work, all technical requirement (Annexure D) and all other terms and conditions / stipulations as contained in the RFP and the related addendums and other documents including the changes made to the original tender documents if any, issued by the Bank. The Bank is not bound by any other extraneous matters or deviations, even if mentioned by us elsewhere either in our proposal or any subsequent deviations sought by us, whether orally or in writing, and the Bank's decision not to accept any such extraneous conditions and deviations will be final and binding on us.

Yours faithfully,

For.....

Designation:

(Signature and seal of authorized person)

Bidder's corporate name:

Place:

Date:

Performa of letter to be given by the Bidder participating in the RFP for UCO Bank for Selection of System Integrator (SI) for Supply, Installation Integration, Implementation and Maintenance of Hardware, Software, Facility Management Services for Finacle Core Banking (Version 10.x) and E-Banking (FEBA) at DC, DR and Near DR Site (Re-tendering) on their official letterheads.

**To
The Deputy General Manager
DIT, BPR & BTD
UCO Bank, Head Office
5th Floor, 3&4, DD Block, Sector-I
Salt Lake, Kolkata -700064**

Dear Sir,

Sub: RFP for UCO Bank for Selection of System Integrator (SI) for Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software ,Facility Management Services for Finacle Core Banking (Version 10.x) and E-Banking (FEBA) at DC, DR and Near DR Site (Re-tendering) vide RFP Ref. No DIT/BPR&BTD/OA/246/2020-21 Date-18/05/2020)

Further to our proposal dated, in response to the Request for Proposal (Bank's tender No. hereinafter referred to as "RFP") issued by Bank, we hereby covenant, warrant and confirm as follows:

The soft-copies of the proposal submitted by us in response to the RFP and the related addendums and other documents including the changes made to the original tender documents issued by the Bank, conform to and are identical with the hard-copies of aforesaid proposal required to be submitted by us, in all respects.

We hereby confirm that we are agreeable to provide services as per SLA for a period of 5 years, may be extended on the basis of performance. All the Annexures with other Technical documents duly filled in and signed are enclosed. We understand that the Bank is not bound to accept the offer either in part or in full and that the Bank has right to reject the offer in full or in part without assigning any reasons whatsoever.

The bid submitted herein shall be valid for a period of 180 days from the date of RFP response submission process closes

Yours faithfully,

Authorized Signatory:

Designation:

Bidder's corporate name:

Undertaking Letter on the bidder's letterhead for Central Minimum Wages Act & Labour Laws.

To
The Deputy General Manager
DIT, BPR & BTB
UCO Bank, Head Office
5th Floor, 3&4, DD Block, Sector-I
Salt Lake, Kolkata -700064

Dear Sir,

Sub: RFP for UCO Bank for Selection of System Integrator (SI) for Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software , Facility Management Services for Finacle Core Banking (Version 10.x) and E-Banking (FEBA) at DC, DR and Near DR Site (Re-tendering) vide RFP Ref. No DIT/BPR & BTB/OA/246/2020-21 Date-18/05/2020)

Further to our proposal dated, in response to the Request for Proposal (Bank's tender No. hereinafter referred to as "RFP") issued by Bank, we hereby covenant, warrant and confirm as follows:

In this regard we confirm that the employees engaged by our Company to carry out the services in your bank for the above said contract are paid minimum wages / salaries as stipulated in the Government (Central / State) Minimum Wages / Salaries act in force. All the employees/operator deployed as part of this solution/activity must comply with government's rules and regulations like minimum wages act, Provident Fund and ESIC facility standard. We also indemnify the Bank against any action / losses / damages that arise due to action initiated by Commissioner of Labour for non-compliance to the above criteria.

We further authorize the Bank to deduct from the amount payable to the Company under the contract or any other contract of the Company with the Bank if a penalty is imposed by Labour Commissioner towards non-compliance to the "Minimum Wages / Salary stipulated by government in the Act by your company.

(Proof of compliance and labour license needs to be submitted along with the quotation).

Yours faithfully,

For.....

Designation:

(Signature and seal of authorized person)

Bidder's corporate name:

Place:

Date:

Application Integrity Statement

(To be submitted in the Company Letter Head with technical Bid)

We undertake, that application supplied for for Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software, Facility Management Services for Finacle Core Banking (Version 10.x) and E-Banking (FEBA) at DC, DR and Near DR Site (Re-tendering) and other applications provided to Bank as per the scope of this RFP is free of malware, free of any obvious bugs, and free of any covert channels in the code.

Authorized signatory

Name:

Designation:

Place:

Date:



NON-DISCLOSURE AGREEMENT**(To be stamped in accordance with the stamp act)**

This Non-Disclosure Agreement is entered into on thisday of, 2020

BETWEEN

UCO Bank, a body corporate, constituted under the Banking Companies (Acquisition & Transfer of Undertakings) Act, 1970 as amended from time to time having its Head Office at No.10, BTM Sarani, Kolkata-700001 hereinafter referred to as "**the Bank**" (which expression shall unless excluded by or repugnant to the subject or context be deemed to mean and include its assigns, administrators and successors) **of the FIRST PART/ DISCLOSING PARTY**

AND

.....
 (Which expression shall unless excluded by or repugnant to the subject or context be deemed to mean and include its assigns, administrator and successors) of the **SECOND PART/ RECEIVING PARTY**

(Each of Bank and the bidder is sometimes referred to herein as a "**Party**" and together as the "**Parties**").

WHEREAS the Bidder/Receiving Party is *inter alia* engaged for **Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software, Facility Management Services for Finacle Core Banking (Version 10.x) and E-Banking (FEBA) at DC, DR and Near DR Site (Re-tendering)** as per the terms and conditions specified in the RFP Ref. No **DIT/BPR & BTD/OA/246/2020-21 dated 18/05/2020**. The Bidder/Receiving Party would be the single point of contact for this project.

WHEREAS Bank/Disclosing Party is *inter alia* engaged in the business of Banking; and

WHEREAS the Parties presently desire to discuss and/or consult with each other's business for the purposes of entering into Agreements for for Supply, Installation, Integration, Implementation and Maintenance of Hardware, Software (Application Server and Backup), Facility Management Services for Finacle Core Banking (Version 10.x) and E-Banking (FEBA) at DC, DR and Near DR Site (Re-tendering).

WHEREAS the Parties recognize that each other's business involves specialized and proprietary knowledge, information, methods, processes, techniques and skills peculiar to their security and growth and that any disclosure of such methods, processes, skills, financial data, or other confidential and proprietary information would substantially injure a Party's business, impair a Party's investments and goodwill, and jeopardize a Party's relationship with a Party's clients and customers; and

WHEREAS in the course of consultation with respect to the potential business venture, the Parties anticipate disclosing to each other certain information of a novel,

proprietary, or confidential nature, and desire that such information be subject to all of the terms and conditions set forth herein below;

NOW THEREFORE the Parties hereto, in consideration of the promises and other good and valuable consideration, agree such information shall be treated as follows:

1. Confidential Information: “**Confidential Information**” shall mean and include any information which relates to the financial and/or business operations of each Party, including but not limited to, specifications, drawings, sketches, models, samples, reports, forecasts, current or historical data, computer programs or documentation and all other technical, financial or business data, information related to each Party's customers, products, processes, financial condition, employees, intellectual property, manufacturing techniques, experimental work, trade secrets.

2. Use of Confidential Information: The Bidder/Receiving Party agrees not to use the Bank/Disclosing Party's confidential Information for any purpose other than for the specific consultation regarding the potential business venture. Any other use of such Confidential Information by the Receiving Party shall be made only upon the prior written consent from an authorized representative of the Disclosing Party which wishes to disclose such information or pursuant to subsequent agreement between the Parties hereto.

3. Restrictions: Subject to the provisions of paragraph 4 below, the Party receiving Confidential Information (the “**Receiving Party**”) shall, for contract period of three (3) years from the date of the last disclosure of Confidential Information made under this Agreement (except for personal customer data which shall remain confidential forever), use the same care and discretion to limit disclosure of such Confidential Information as it uses with similar confidential information of its own and shall not disclose, lecture upon, publish, copy, modify, divulge either directly or indirectly, use (except as permitted above under clause (2) or otherwise transfer the Confidential Information to any other person or entity, including taking reasonable degree of care and steps to:

(a) restrict disclosure of Confidential Information solely to its concerned employees, agents, advisors, consultants, contractors and /or subcontractors with a need to know and not disclose such proprietary information to any other parties; and

(b) advise all receiving Party's employees with access to the Confidential Information of the obligation to protect Confidential Information provided hereunder and obtain from agents, advisors, contractors and/or consultants an agreement to be so bound.

(c) use the Confidential Information provided hereunder only for purposes directly related to the potential business venture.

4. Exclusions: The obligations imposed upon Receiving Party herein shall not apply to information, technical data or know how, whether or not designated as confidential, that:

- (a) is already known to the Receiving Party at the time of the disclosure without an obligation of confidentiality;
- (b) is or becomes publicly known through no unauthorized act of the Receiving Party;
- (c) is rightfully received from a third Party without restriction and without breach of this Agreement;
- (d) is independently developed by the Receiving Party without use of the other Party's Confidential Information and is so documented;
- (e) is disclosed without similar restrictions to a third party by the Party owning the Confidential Information;
- (f) is approved for release by written authorization of the Disclosing Party; or
- (g) is required to be disclosed pursuant to any applicable laws or regulations or any order of a court or a governmental body; provided, however, that the Receiving Party shall first have given notice to the Disclosing Party and made a reasonable effort to obtain a protective order requiring that the Confidential Information and/or documents so disclosed be used only for the purposes for which the order was issued.

5. Return of Confidential Information: All Confidential Information and copies and extracts of it shall be promptly returned by the Receiving Party to the Disclosing Party at any time within thirty (30) days of receipt of a written request by the Disclosing Party for the return of such Confidential Information.

6. Ownership of Information: The Receiving Party agrees that all Confidential Information shall remain the exclusive property of the Disclosing Party and its affiliates, successors and assigns.

7. No License Granted: Nothing contained in this Agreement shall be construed as granting or conferring any rights by license or otherwise in any Confidential Information disclosed to the Receiving Party or to any information, discovery or improvement made, conceived, or acquired before or after the date of this Agreement. No disclosure of any Confidential Information hereunder shall be construed by the Receiving Party to be a public disclosure of such Confidential Information for any purpose whatsoever.

8. Breach: In the event the Receiving Party discloses, disseminates or releases any Confidential Information received from the Disclosing Party, except as provided above, such disclosure, dissemination or release will be deemed a material breach of this Agreement and the Disclosing Party shall have the right to demand prompt return of all Confidential Information previously provided to the Receiving Party and in such case, the Receiving party shall be bound to return all information within 30 days from the date of such demand. The provisions of this paragraph are in addition to any other legal right or remedies, the Disclosing Party may have under the Law for the time being in force.

9. Arbitration and Equitable Relief

(a) Arbitration: The Parties shall endeavour to settle any dispute/difference arising out of or relating to this Agreement through consultation and negotiation. In the event no settlement can be reached through such negotiation and consultation, the Parties agree that such disputes shall be referred to and finally resolved by arbitration under the provisions of the Arbitration and Conciliation Act, 1996 and the rules made thereunder from time to time. The arbitration shall be held in Kolkata. The language used in the arbitral proceedings shall be English. The arbitration proceeding shall be conducted by a panel of three arbitrators, each party shall appoint his own arbitrator and the two appointed arbitrators shall appoint the third arbitrator who shall act as presiding Arbitrator.

(b) Equitable Remedies: The Parties agree that in event of breach of any of the covenants contained in this Agreement due to negligence/fault/laches of the Receiving Party, the Disclosing party shall have, in addition to any other remedy, the right:

- i) to obtain an injunction from a court of competent jurisdiction restraining such breach or threatened breach; and
- ii) to specific performance of any such provisions of this Agreement. The Parties further agree that no bond or other shall be required in obtaining such equitable relief and the Parties hereby consent to the issuance of such injunction and to the ordering of specific performance.

(c) Legal Expenses: If any action and proceeding is brought for the enforcement of this Agreement, or because of an alleged or actual dispute, breach, default, or misrepresentation in connection with any of the provisions of this Agreement, each Party will bear its own expenses, including the attorney's fees and other costs incurred in such action.

(d) Indemnification: The Receiving Party shall indemnify the Bank and hold the Bank harmless against any loss caused to it as a result of the non-performance or improper performance of this Agreement by the Receiving Party, or its servants or agents to perform any aspect of its obligations forming part of the subject matter of this Agreement.

10. Term: This Agreement may be terminated by either Party giving sixty (60) days' prior written notice to the other Party; provided, however, the obligations to protect the Confidential Information in accordance with this Agreement shall survive for a period of three (3) years from the date of the last disclosure of Confidential Information made under this Agreement (except for personal customer data which shall remain confidential forever).

11. No Formal Business Obligations: This Agreement shall not constitute create, give effect to or otherwise imply a joint venture, pooling arrangement, partnership, or formal business organization of any kind, nor shall it constitute, create, give effect to, or otherwise imply an obligation or commitment on the part of either Party to submit a proposal or to perform a contract with the other Party or to refrain from entering into an agreement or negotiation with any other Party. Nothing herein shall be construed

as providing for the sharing of profits or loss arising out of the efforts of either or both Parties. Neither Party will be liable for any of the costs associated with the other's efforts in connection with this Agreement. If the Parties hereto decide to enter into any licensing arrangement regarding any Confidential Information or present or future patent claims disclosed hereunder, it shall only be done on the basis of a separate written agreement between them.

12. General Provisions

(a) Governing Law: This Agreement shall be governed by and construed in accordance with the laws of India.

(b) Severability: If one or more of the provisions in this Agreement is deemed void by law, then the remaining provisions shall remain valid and continue in full force and effect.

(c) Successors and Assign: This Agreement will be binding upon the successors and/or assigns of the Parties, provided however that neither Party shall assign its rights or duties under this Agreement without the prior written consent of the other Party.

(d) Headings: All headings used herein are intended for reference purposes only and shall not affect the interpretation or validity of this Agreement.

(e) Entire Agreement: This Agreement constitutes the entire agreement and understanding of the Parties with respect to the subject matter of this Agreement. Any amendments or modifications of this Agreement shall be in writing and executed by a duly authorized representative of the Parties.

(f) Jurisdiction of Court: All disputes under this Non-Disclosure Agreement are subject to the jurisdiction of Courts of Kolkata only.

(g) Two original sets of Non Disclosure Agreement are executed and retained by either parties, Bank and _____ (the selected bidder)

The Parties, by the signature of their authorized representatives appearing below, acknowledge that they have read and understood each and every term of this Agreement and agree to be bound by its terms and conditions.

For and on behalf of

.....

Signature: _____

Name: _____

Designation: _____

Date: _____

For and on behalf of

.....

(The selected bidder)

Signature: _____

Name: _____

Designation: _____

Date: _____