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1. DISCLAIMER

1.1 Though adequate care has been taken in the preparation of this *Request for Proposal* Document, the Bidder should satisfy himself that the Document is complete in all respects. Intimation of discrepancy, if any, should be given to the below mentioned office latest by the date mentioned in Sec.5.7. If this office receives no intimation by the date mentioned in Section 5.7, it shall be deemed that the Bidder is satisfied that the *Request for Proposal* Document is complete in all respects.

Member Secretary Maharashtra Pollution Control Board Kalpataru Point, 3rd floor, Opp. Cine Planet Cinema, Sion Circle Sion (E), MUMBAI – 22 Ph: 022-24014701 Fax: 022-24024068

- 1.2 Neither **MPCB**, nor their employees or consultants make any representation or warranty as to the accuracy, reliability or completeness of the information in this RFP nor is it possible for **MPCB** to consider the financial situation and particular needs of each party who reads or uses this RFP. **MPCB** recognizes the fact that certain prospective Bidders may have a better knowledge of the Project than others and thus encourages all prospective Bidders to conduct their own investigations and analysis and check the accuracy, reliability and completeness of the information in this RFP and obtain independent advice from appropriate sources.
- 1.3 Neither **MPCB** nor their employees or consultants will have any liability to any prospective Bidder or any other person under the law of contract, tort, the principles of restitution or unjust enrichment or otherwise for any loss, expense or damage which may arise from or be incurred or suffered in connection with anything contained in this RFP, any matter deemed to form part of this RFP, the award of the Project, the information and any other information supplied by or on behalf of **MPCB** or their employees, any consultants or otherwise arising in any way from the selection process for the Project.
- 1.4 **MPCB** reserves the right to reject any or all of the Bids submitted in response to this *Request for Proposal* at any stage without assigning any reasons whatsoever.
- 1.5 **MPCB** reserves the right to change any or all of the provisions of this *Request for Proposal.* Such changes would be intimated to all parties procuring this *Request for Proposal.*

2. LIST OF ABBREVIATIONS

MPCB	Maharashtra Pollution Control Board
CPCB	Central Pollution Control Board
PMC	Project Management Consultant
RO	Regional Office, MPCB
SRO	Sub-Regional Office, MPCB
DC	Data Centre
DR	Disaster Recovery
HO	Head Office, MPCB
RFP	Request for Proposal
IMIS	Integrated Management Information System
NOC	Network Operations Centre
OEM	Original Equipment Manufacturer
UPS	Uninterrupted Power Supply
LAN	Local Area Network
WAN	Wide Area Network
PBG	Performance Bank Guarantee
SPBG	Service Performance Bank Guarantee
LOA	Letter of Award
SLA	Service Level Agreement
ISP	Internet System Integrator
SP	System Integrator
MPLS	Multi Protocol Label Switching
VPN	Virtual Private Network
VPN	Virtual Private Network
Mbps	Mega Bits per Second
KBps	Kilo Byte per Second

3. DEFINITIONS

3.1 BID

The bids submitted by the prospective Bidders in response to this Request for Proposal Document issued by **MPCB**.

3.2 BIDDER

Bidding Firm / Company that has submitted a Bid in response to this Request for Proposal Document.

3.3 DOCUMENT / BID DOCUMENT

This Request for Proposal Document.

3.4 PROJECT

To select an appropriate System Integrator (SI) for Data Centre Core Infrastructure Modernisation.

3.5 REQUEST FOR PROPOSAL

This Document being issued to the prospective Bidders, inviting their Bids.

3.6 **RESPONSIVE BIDDER**

Responsive Bidder is the bidder whose bid is found responsive after evaluation of the Bid as outlined in Section 5.2.

3.7 SCREENING COMMITTEE

A committee consisting of Information Technology professionals, MPCB Officials and the consultants has been formed.

4. PROJECT CONCEPT & STRUCTURE

4.1 BACKGROUND

Maharashtra Pollution Control Board (MPCB) is an organization under the Department of Environment, Government of Maharashtra. The Board is responsible for ensuring that all norms under the Pollution Control Act as stated by the Ministry are adhered to by all relevant establishments in Maharashtra, which can, through their operations or processes, influence the natural environmental conditions.

The Board has deployed Integrated Management Information System (IMIS) – an integrated e-governance application for automation of their various processes and workflows, such as consent management, cess management, waste management, etc.

The IMIS is rolled out to various offices of the Board and the same is accessed through IT infrastructure deployed at these offices. As a part of IMIS rollout, the Board has deployed a Data Centre facility at HO since 2008. The Board is in the process of modernizing the ICT infrastructure and hence is in the process of modernizing the core IT infrastructure within the Data Centre.

4.2 CURRENT INFRASTRUCUTRE

MPCB has a LIVE Data Centre facility at HO, Sion. The core infrastructure components viz Servers, Storage, Network, etc. are housed in the Data Centre. There are various applications hosted the servers which are accessed by the MPCB users in their various regional and sub-regional offices (RO and SRO) and Laboratories across Maharashtra. These various offices are connected through MPLS VPN and are protected through a Firewall. There is a robust storage and Backup infrastructure along with automated backup facility.

The details of the relevant current infrastructure are given for the convenience of the bidders at Annexure -1.

4.3 OBJECTIVE OF THE RFP

The current core infrastructure is old and aging. It is the objective of the RFP to select the most suitable System Integrator (SI) for migration of the current MPCB applications to a new and modernized hardware platform using Virtualisation.

It may be noted that the ALL the current applications which are LIVE need to be ported seamlessly and with no or minimal downtime, so that the working of MPCB continues in the same manner as before the transition, transparently to the users.

The System integrator (SI) is required to supply the equipment required, install, test and commission the same. Post implementation, the SI is required to provide preventive and breakdown support for the infrastructure.

4.4 EXECUTION PERIOD

The System Integrator will be required to supply the required equipment, complete the installation and commissioning of the equipment with proper testing and create documentation of the infrastructure as a part of the handover exercise. All the activities mentioned here are to be completed within FIFTEEN (15) weeks from the date of LoA. The System Integrator is mandated to support the infrastructure for THREE (3) years from the date of CoOP as per the required Service Levels.

5. DESCRIPTION OF THE SELECTION PROCESS

5.1 SUBMISSION OF BIDS

The submission of Bids by interested bidders in response to the Request for Proposal should be through e-Tender system only as mentioned in Annexure 5. The Bids will be

Envelope 1 / Cover 1: Technical Bid Envelope 2 / Cover 2 : Price Bid.

5.2 RESPONSIVENESS OF BID

The Bids submitted by Bidders shall be initially scrutinized to establish "Responsiveness". A Bid may be deemed "Non-responsive" if it does not satisfy any of the following conditions:

- 1. It is not received by the due time & date specified in the section 5.7
- 2. It does not include EMD as stipulated in the RFP
- 3. It does not include sufficient information for it to be evaluated and/or is not in the formats specified.
- 4. It is not signed and / or sealed in the manner and to the extent indicated in Section 6 of this RFP Document.
- 5. It does not conform to the terms and conditions mentioned in the RFP

The Bids of Responsive Bidders shall be evaluated in the following two steps.

5.3 STEP 1 (COVER 1) – TECHNICAL BID EVALUATION

In the first step, MPCB will evaluate the information submitted by the Bidder in Cover 1 of the Bid. Bids of only the responsive Bidders shall be considered for the subsequent technical evaluation. The evaluation criteria for assessment of the Technical Bid are described in Section-7.4.1. MPCB, on a written demand, will return unopened, the Cover 2 of the Bid, viz: the Price Bid, to the Bidders whose Bids are not responsive.

5.4 STEP 2 (COVER 2) – PRICE BID AND PRICE BID EVALUATION

The Price Bid would seek to identify the Bidder making the most competitive price offer to MPCB. The evaluation criteria for assessment of the Price Bid are described in Section -9. The format for the Price Bid is specified in Annexure - 4

A ranked list of Bidders based on the results of the evaluation, as detailed in Section-9 of this Document, would be presented. The top ranked Bidder will be designated the Successful Bidder. MPCB is not bound to award a LoA to the lowest price bidder.

5.5 AWARD OF LoA

Successful Bidder would be given a Letter of Award (LoA) stipulating the conditions under which the bid has been qualified as the Successful Bid.

5.6 SIGNING OF ORDER ACCEPTANCE

The Successful Bidder would sign a copy of the Purchase / Work Order as a token of acceptance of the same.

5.7 SCHEDULE OF ACTIVITIES

Sr. No.	ACTIVITY	Date		
1.	Date of Start of Sale of RFP document	11 th December 2015		
2.	Date of End of Sale of RFP document 23 rd December 20			
3.	Last date for receipt of requests for clarifications	28 th December '15		
4.	Pre-bid Conference	30 th December '15 1500 Hrs		
5.	Last date & time for receipt of Bids (Containing Covers 1 & 2)	1700 Hrs, 08 th January 2016		
6.	Time and Date of Opening of Cover-1	1400 Hrs, 13 th January 2016		
7.	Presentation by the bidders on their project implementation and support methodology with proposed schedule of activities	1400 Hrs, 16 th January 2016		

Bidders are also requested to read Annexure – 5 for detailed schedule of activites related to this RFP and bid submission process

In order to enable MPCB to meet the target dates, Bidders are expected to respond expeditiously to clarifications, if any, requested during the evaluation process. MPCB shall adhere to the above schedule to the extent possible. MPCB, however, reserves the right to modify the same. Intimation to this effect shall be given to all Bidders.

6. PROCEDURES TO BE FOLLOWED

6.1. ENQUIRIES & CLARIFICATIONS

Enquiries, if any, should be addressed to:

Member Secretary Maharashtra Pollution Control Board Kalpataru Point, 3rd floor, Opp. Cine Planet Cinema,Sion Circle, Sion (E), MUMBAI – 400 022 Ph: 022-24014701 Fax: 022-24024068

All queries that are received on or before the date mentioned in Section 5.7 shall be addressed by MPCB in writing. MPCB shall aggregate all such queries, without specifying the source and shall prepare a response, which shall be distributed to all parties who have procured the Request for Proposal Document. It may be noted that queries in writing would be entertained only from those parties who have procured this Document.

Request for clarifications received from prospective bidders who have not paid the fee for the RFP document as defined in 6.6.1, will not be answered. Such bidders will not be allowed to attend the pre bid meeting and also to bid..

Request for clarifications received after the last date mentioned in Section 5.7, may not be addressed. Decision of the Board in the matter will be final.

The prospective Bidders shall submit the queries only in the format given below:

Sr. No	RFP Page No	RFP Clause No	•	Clarification Sought	Additional Remark (if any)

6.2. SUBMISSION OF THE BID

- Cover 1 Technical Bid The information to be submitted by the Bidders as Cover 1 of their Bids is described in Section 7 and Annexure 5.
- Cover 2 Price Bid The Information to be submitted by the Bidders in the Price Bid (Cover 2) is described in Section 9 and Annexure 5.
- 3. Submission of the Bid

The Bidders are requested to follow the Bid submission process which is detailed in Annexure 5 as per the schedule elaborated in Section 5.7 and Annexure 5.

MPCB shall not be responsible for any delay in submission of the Bids. Any Bid received by MPCB after the due date for submission of the Bids stipulated in Section 5.7 and Annexure 5, will not be opened..

6.3. INITIALING OF THE BIDS

As prescribed in the Annexure 5, under this e-tender process the bids should be digitally signed. Any testimonials being presented should be self-attested before uploading.

6.4. INSTRUCTIONS TO BIDDERS

All Bidders should note the following:

- 1. Bids that are incomplete in any respect or those that are not consistent with the requirements as specified in this *Request for Proposal* or those that do not contain the Covering Letter and other documentation as per the specified formats may be considered non-responsive and may be liable for rejection.
- 2. Strict adherence to formats, wherever specified, is required. Non-adherence to formats may be a ground for declaring the Bid non-responsive.
- 3. All communication and information should be provided in writing and in the English language only.
- 4. The metric system shall be followed for units.
- 5. The price quotations for the bid should be denominated in Indian Rupees.
- 6. All communication and information provided should be legible, and wherever the information is given in figures, the same should also be mentioned in words.
- 7. Arithmetical errors will be rectified as follows
 - a. If there is a discrepancy between the unit price and the total price that is obtained by multiplying quantities, the unit price will prevail
 - b. In case of discrepancy between grand total obtained by adding various line item totals & the grand amount stated in words, the grand total will be recalculated and the same will be taken as correct.
 - c. The price bid will be treated as inconsistent & non-responsive, in case if more than one type of discrepancy is observed in the price bid. Such price bid/s will be rejected summarily and considered as intentional misrepresentation and the EMD will be forfeited.

- 8. MPCB reserves the right to seek additional information from the Bidders, if found necessary, during the course of evaluation of the Bid. Non-submission, incomplete submission or delayed submission of such additional information or clarifications sought by MPCB, may be a ground for rejecting the Bid.
- 9. The Bids shall be evaluated as per the criteria specified in this RFP Document. However, within the broad framework of the evaluation parameters as stated in this Request for Proposal, MPCB reserves the right to make modifications to the stated evaluation criteria, which would be uniformly applied across all the Bidders.
- 10. The Bidder should designate one person ("Contact Person" and "Authorized Representative and Signatory") authorized to represent the Bidder in its dealings with MPCB. The Acknowledgement of Receipt of Request for Proposal Document shall be signed by the "Contact Person" and "Authorized Representative and Signatory". This designated person should hold the Power of Attorney and be authorized to perform all tasks including but not limited to providing information, responding to enquiries, entering into contractual commitments on behalf of the Bidder etc. The Covering Letter submitted by the Bidder shall be signed by the Authorized Signatory and shall bear the stamp of the entity thereof.
- 11. The Bid (and any additional information requested subsequently) shall also bear the initials of the Authorized Signatory and stamp of the entity thereof on each page of the Bid.
- 12. MPCB reserves the right to reject any or all of the Bids without assigning any reason whatsoever
- 13. Conditional bids may be summarily rejected.
- 14. Mere submission of information does not entitle the Bidder to meet an eligibility criterion. MPCB reserves the right to vet and verify any or all information submitted by the Bidder.
- 15. If any claim made or information provided by the Bidder in the Bid or any information provided by the Bidder in response to any subsequent query by MPCB, is found to be incorrect or is a material misrepresentation of facts, then the Bid will be liable for rejection and the Bid Security will be forfeited. Mere clerical errors or bonafide mistakes may be treated as an exception at the sole discretion of MPCB and if MPCB is adequately satisfied.
- 16. The Bidder shall be responsible for all the costs associated with the preparation of the Bid. MPCB shall not be responsible in any way for such costs, regardless of the conduct or outcome of this process.

6.5. VALIDITY OF THE PRICE BID

Each Bid shall indicate that it is a firm and irrevocable offer, and shall remain valid and open for a period of not less than 180 days.

Non-adherence to this requirement and other terms stipulated in the RFP document may be a ground for declaring the Bid as non-responsive. However, MPCB may solicit the Bidder's consent for extension of the period of validity if the Bidder agrees to reasonably consider such a request. The request and response shall be in writing. A Bidder accepting MPCB's request for extension of validity shall not be permitted to modify his Bid in any other respect.

6.6. FEES AND DEPOSITS TO BE PAID BY THE BIDDERS

6.6.1. Fees for Request for Proposal (RFP) document

The RFP can be purchased by making a payment (non-refundable) of Rs. 10,000.00 (Rs. Ten Thousand only) through online payment. Pls refer Annexure 5 of this document for the payment methodology.

It is mandatory for the bidders to display the proof of purchase of the RFP document to attend the pre-bid meeting. Prospective bidder failing to pay the fee for the RFP during the sale of RFP document will neither be allowed to attend the pre-bid meeting nor will his bid be accepted.

6.6.2. Earnest Money Deposit (EMD)

Bidders are required to submit a Earnest Money deposit (EMD) for an amount of **Rs. 3,00,000.00 (Rupees Three Lacs Only)**. Pls refer Annexure 5 for the payment of the same. Bids of the bidders who have not paid the EMD as stipulated in this RFP, will be rejected by MPCB as non-responsive. No exemptions to this clause will be allowed.

MPCB shall reserve the right to forfeit the Bidder's EMD under the following circumstances:

- 1. If the Bidder withdraws his Bid at any time during the stipulated period of Bid validity as per Section 8.1 (or as may be extended).
- 2. If the Bidder, for the period of Bid validity:
 - i) in MPCB's opinion, commits a material breach of any of the terms and / or conditions contained in the RFP Document and / or subsequent communication from MPCB in this regard and / or
 - ii) fails or refuses to execute the LoA (in the event of the award of the Project to it) and/or
 - iii) fails or refuses to furnish the Service Performance Guarantee within the stipulated time

3. Any claim made or information provided by the Bidder in the Bid or any information provided by the Bidder in response to any subsequent query by MPCB, is found to be incorrect or is a material misrepresentation of facts

In the event that any Bid is non-responsive or rejected after technical evaluation, the EMD of such Bidders shall be refunded with the unopened Cover – 2 of their Bid.

In respect of the bids after Technical Evaluation and eligible for price bid evaluation, the EMD of the unsuccessful Bidders (after opening of Cover 2) can cease to be in force after 60 days following the announcement of award of the Project to the Successful Bidder through the issue of the LoA for the same. The EMD of the successful Bidder will be returned only on submission of SPBG that Successful Bidder will provide at the time of signing Order acceptance & the SLA. EMD of the unsuccessful bidders will be returned after 45 days of award of contract.

7. SUBMISSION OF TECHNICAL BID: COVER - 1

7.1. CRITERIA FOR MINIMUM ELIGIBILITY AND BID RESPONSIVENESS:

The Bidder shall fulfill the following Minimum Eligibility Criteria to participate in the bidding process. The Bidder should provide necessary documentary evidences of compliance as follows. Failure to do so for any of the Criteria mentioned below shall result in disqualification of the Bidder.

- The Bidder should be a Corporate entities, public or private limited company registered / incorporated under The Companies Act, 1956, and in business of IT system Integration and maintenance services for minimum FIVE (5) years. No consortiums allowed.
- 2. The bidder should have a minimum Turn Over of Rs. 50,00,00,000.00 (Rs. Fifty crores only) as on 31st March 2014.
- 3. The bidder must be and ISO 9001 certified having a Valid Certificate on the date of bidding
- 4. The Bidder should be 100% compliant to the Technical specifications given in Annexure 3
- 5. The Bidder should have officially purchased the RFP document from MPCB office by paying the necessary fees as per section 6.7.1 of the RFP.
- 6. The Bidder should submit the EMD as stipulated in section 6.6.2

7.2. COVER 1: INFORMATION FORMATS

Bidders are required to organize Cover-1 as per the following checklist -

Cover 1	Compliance to Minimum Eligibility Criteria and Technical Bid			
Section 1	 a) Covering Letter as per the format specified in EXHIBIT 1 b) Attested copy of Power of Attorney c) EMD as per section 6.6.2 d) Certificate of incorporation / registration e) CA's certificate about the Net worth as on 31st March 2014 f) Proof of Purchase of the RFP document g) Compliance of Technical Specifications as given in Annexure 3 			

Section 2	 a) Documentary Proofs as testimony for Evaluation of Technical bids as per criteria listed in Section 7.4.1 b) Manufacturer's Authorization Form in the prescribed format as mentioned in Exhibit 3 c) Technical proposal highlighting Company profile Proposed methodology to execute the project Resource availability with their skill sets and deployment plan for MPCB
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7.3. TECHNICAL BID - COVER 1

The Cover 1 submission will also include Technical Bid of the bidder.

- 1. The bid should explain proposed methodology for undertaking the project as envisaged in the RFP document.
- 2. The bid should have all relevant testimonials, so as to ensure they score maximum marks under the evaluation system defined in section 7.4.1

7.4. TECHNICAL BID: EVALUATION CRITERIA & PROCESS

The Bidder shall necessarily submit in Cover 1 of the Bid Document, the Technical Bid detailing his credentials for executing this project and the highlights of the services proposed with respect to scope of work defined in the Bid Document and the benefits that would accrue to MPCB. The Screening Committee appointed for this purpose will do this evaluation. The Technical Bid will contain all the information required to evaluate the bidder's suitability to MPCB for the purpose of this project.

The guidelines for evaluation have been designed to facilitate the objective evaluation of the Technical Bid submitted by the bidder. The information furnished by the bidders in the technical bid shall be the basis for this evaluation. In case any of the information is not made available, the Committee will assign zero (0) marks to that item.

While evaluating the Technical Bid, MPCB reserves the right to seek clarifications from the Bidders. Bidders shall be required to furnish such clarifications in a timely manner.

MPCB also reserves the right to seek additions, modifications and other changes to the submitted Bid. Bidders shall be required to furnish such additions / modifications / other changes in a timely manner.

7.4.1. Evaluation of Technical Bid

The technical evaluation of the bidders will be done based on the criteria and marking system as specified as follows:

Sr. No.	Criteria	Graded Marks	Max. Marks	Testimonial to be presented
1	Constitution and Average Annual Turnover		20	
а	Constitution of Bidder			
	Private Limited	5		Certificate of Incorporation / Partnership Deed
	Public Limited	10		
	Average Turnover (AT) of the organisation for past 3 financial years ending 31st March 2014			
b	AT < Rs 45.00 crores but > 40.00 Crores	2		Certificate from CA
	AT < Rs. 50.00 crores but ≥ 45.00 Crores	5		
	AT ≥ Rs. 50.00 crores	10		
2	Past Performance		35	
a	Orders execute for supply and commissioning of min. 250 Sq. Ft. Each Order should include ICT infrastructure supply i.e. Minimum Servers, SAN storage and Network Switches			
-	Orders = 1	2		
	Orders = 2	5		
	Orders ≥ 3	10		Self Certified list of orders
	Migration including Server Virtualisation			giving name & address of customer, telephone number &
b	Orders < 2 but > 1	5		email ID of contact person,
U	Orders < 4 but ≥ 2	10		value of order, year of
	Orders ≥ 4	15		execution of order and brief
	Single Orders executed in the past 3 financial years ending March 2014 for value > Rs. 2 crore in Govt / Semi Govt organisation			description of the assignment
С	Orders < 2 but > 1	2		
	Orders < 4 but ≥ 2	5		
	Orders ≥ 4	10		
3	Organisation Capabilities		20	
а	Bidding organisation has a valid ISO 27001 Certification, as on the date of bidding	5		Self attested copy of the valid certificate
b	Certified Virtualisation professionals from VMware / Microsoft ≥ 2	5	Names of professionals in bidder's permanent	
С	Certified Resources for Microsoft SQL ≥ 2	5		employment for the past 12 months, duly attested by the
d	Certified Resources for Oracle ≥ 1	5		bidder and copies of their relevant certificates
4	Presentation on Implementation Methodology		25	Write-up of the plan and actual presentation to be included in the Technical Bid
TOTAL MARKS 100				

Each responsive Bid will be attributed a technical score denoted by symbol "S(t)".

The technical score shall be out of a maximum of 100 marks.

If in MPCB's opinion, the Technical Bid does not meet the minimum technical specifications & service requirements or is otherwise materially deficient / inconsistent in any other aspect; the Bid shall be declared Technically Evaluated & Non-Responsive and shall not be considered for further evaluation.

After technical evaluation, MPCB will rank the bidders in descending order of their technical scores with the top ranked bidder having the highest technical score. If any bidder is found to be technically inadequate to the requirements of MPCB, i.e. if the technical marks are lower than **75**, then that bidder's bid would be deemed non-responsive for further evaluation and would not be considered further in the bidding process.

If in case, after technical evaluation, only one bidder is found to be responsive & eligible, i.e. if the technical marks of only one bidder are more than or equal to **75**, the Board will decide an acceptable price band and open Price Bid of the only eligible bidder. If the price bid of the bidder falls within the price band specified by the Board, the bidder will be declared as the SUCCESSFUL BIDDER.

7.5. PRESENTATION BY BIDDERS

MPCB shall invite the Bidders to make a presentation, at their own cost and expenses, for their execution methodology and support plan to meet the required SLA. The schedule for the presentation along with date and time slot will be communicated to the bidder/s, by MPCB at a later date.

8. PAYMENT TERMS

- **8.1** The Price Bid should be valid for a minimum period of 180 days from the last date of submission of bids
- **8.2** Following payment terms will be offered to the successful Bidder:
 - Within 15 days of receipt of LoA the Successful bidder will submit to MPCB a SPBG for 10% of the value of the contract. The SPBG shall be in the form of a guarantee of a Nationalised Bank(s) acceptable to the MPCB and shall be valid till 5 months from the date of acceptance of the successful bidders' deliverables by MPCB and issuance of Certificate of Operation (CoOp) by MPCB.
 - 2. The bidder on completion of the project and on receipt of the CoOp from MPCB shall at its cost, charges and expenses will submit a PBG for an amount equivalent to 10% of the value of the contract in favour of MPCB. The PBG shall be in the form of a guarantee/s of a Nationalised Bank acceptable to MPCB and shall be valid till the end of 38 months from the date of issuance of Certificate of Operation.

- 3. MPCB will release the SPBG after the bidder submits to MPCB, a Copy of the Certificate of Operation and PBG as described in Clause 8.2.2 above.
- 4. An amount equivalent to 90% of the value of the contract value will be paid on submission of invoice along with CoOp.
- 5. Balance amount of 10% of the contract value will be paid within 15 days of incident free operation of the modernized infrastructure..
- 6. All payments will be made after deduction of penalties if any, vide a crossed cheque payable in Mumbai and within 30 days of submission of invoice.

8.3 Liquidity Damages and Penalty:

For any delay in installation and commissioning beyond FIFTEEN (15) weeks from the date LoA / Purchase Order, the Board reserves the right to charge an LD (Liquidated Damages) at the rate of 1% of the total contract value for the delay of every week or part thereof, subject to a maximum of 10% of the total contract value.

9. EVALUATION OF PRICE BID: COVER 2

9.1 PRICE BID PARAMETERS

Bidders are required to offer their best prices for the services only in the format of the price bid given at Annexure-1 of this RFP document. Price offer in any other format will rejection of the bid and disqualification of the bidder from the evaluation process.

9.2 EVALUATION OF PRICE BIDS AND RANKING

The price bids of only technically successful bidders whose technical Bids have been awarded **75** or more marks by the Committee will be opened.

The evaluation will carried out if Price bids are complete and computationally correct. For the purpose of evaluation, only the Grand Total Price Z arrived at by addition of Sub Total - X & Sub Total- Y will be considered. For the purpose of arriving at Grand Total Price Z, the locations to be covered under implementation priority -1 will only be considered. Additional and/or optional charges if any will not be considered for the purpose of price bid evaluation. Lowest Price bid (denoted by symbol "P (m)") will be allotted a Price score of 100 marks. The Price score will be denoted by the symbol "S (p)". The Price score of other bidders will be computed by measuring the respective Price bids against the lowest bid.

These Price scores will be computed as: S (p) = 100 * (P (m) / P) where P is the Price bid of the bidder whose Price score is being calculated. The Price score shall be out of a maximum of 100 marks.

9.3 COMPUTING THE FINAL SCORE

The composite score is a weighted average of the Technical and Price Scores. The weightages of the Technical vis-à-vis the Price score is 0.65 of the Technical score and 0.35 of the Price score. The composite score (S) will be derived using following formula:

$$S = (S(t) * 0.65) + (S(p) * 0.35).$$

Thus the composite score shall be out of a maximum of 100 marks.

The responsive bidders will be ranked in descending order according to the composite score as calculated based on the above formula. The highest-ranking vendor as per the composite score will be selected. However in order to ensure that MPCB gets best solution in technical terms, MPCB reserves the right to enter into negotiation with bidder having highest technical score and place order with this bidder at a suitable price.

9.4 AWARD CRITERIA

Final choice of MPCB to award this project to a suitable bidder to execute this project shall be made on the basis of composite scoring arrived as per formula mentioned above.

9.5 NOTIFICATION OF AWARD

MPCB will notify the successful bidder in writing that his bid has been accepted. Upon the successful bidder's furnishing of performance security, MPCB will promptly notify each unsuccessful bidder and will discharge their bid security.

10.INDEMNIFICATION

The bidder hereby agrees and undertakes that, during the Term of the Contract, it shall indemnify and keep indemnified and otherwise save harmless, MPCB from any third party suits instituted against MPCB which are proved to be because of a direct consequence of the installation and / or use of equipment & services provided by the successful bidder.

11. ASSIGNABILITY

The successful bidder will not assign its rights, title or interest in the contract in favour of any third party without prior written consent of MPCB. MPCB reserves its rights to grant such consent on such terms and conditions, as it deems fits and proper. MPCB's decision to grant such consent or refusal to grant such consent shall be final.

12. CONFIDENTIALITY

Successful Bidder shall hold data and information about MPCB, obtained during the execution of its responsibilities, in strict confidence and will not reveal such information to any other party without the prior written approval of MPCB.

Successful Bidder and MPCB shall maintain in confidence any information relating to the terms and conditions of this contract, information received from each other hereto in connection with this agreement as well as the business operations and affairs of MPCB or the successful bidder and their affiliates and shall not provide access to such information to any third party. This obligation shall expire 2 years after completion of the contract.

13. CORRUPT & FRAUDULENT PRACTICES

MPCB requires that the bidder under this RFP document maintains highest standards of ethics during procurement and execution of this project. In pursuance of this policy the board defines the terms set forth as follows

"corrupt practice" means offering, giving, receiving or soliciting of anything of value to influence the action or decision making of public official in the procurement process or execution of the project.

"fraudulent practice" means misrepresentation of facts in order to influence the action or decision making of public official in the procurement process or execution of the project to the detriment of the board, 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 board the benefits of free & open competition.

If it is determined that bidder / s are engaged in corrupt & fraudulent practices their bid/s will be rejected and also will be declared ineligible for indefinite period or a stated period to time to participate in any future RFP floated by MPCB.

14. TERMINATION OF CONTRACT

14.1 Termination for Default

MPCB without prejudice to any other remedy available for breach of Contract may terminate the Agreement in whole or in part, by a 7 days notice in writing to the System Integrator for any one or all of the following. On such termination, in addition to any other remedy available under the contract the EMD / PBG /SPBG will be liable for forfeiture.

1. The System Integrator in the judgment of MPCB has made any misrepresentation of facts and / or engaged in corrupt, fraudulent practices.

MPCB shall afford an opportunity to the System Integrator to represent his case before termination of the agreement.

2. The System Integrator fails to complete the project within the given time frame as mentioned in Clause 4.4 of this RFP.

In the event MPCB terminates the Agreement in whole or in part, MPCB may procure upon such terms and in such manner as it deems appropriate products and / or service similar to those undelivered and the System Integrator shall be liable to pay to MPCB for any excess costs occurred for procuring such similar services.

14.2 Termination for Insolvency

If the System Integrator becomes bankrupt of otherwise insolvent, MPCB may terminate the Contract by giving written notice of 15 days to the System Integrator. In this event, termination of the contract will be without compensation to the System Integrator, provided that such termination shall not prejudice any right to action or remedy available to the MPCB which is provided in the RFP document,.

15. ARBITRATION

All disputes, differences, claims and demands arising under or pursuant to or touching this document shall be settled by arbitration of sole arbitrator to be appointed by both the parties and failing such agreement, by two arbitrators, one to be appointed by each party to disputes. All arbitrations shall be held at Mumbai location.

16. FORCE MAJEURE

Notwithstanding the provisions of the RFP, the service provider or MPCB shall not be liable for penalty or termination for default if and to the extent that it's delay in performance or other failure to perform its obligations under the contract is the result of an event of Force Majeure. For purposes of this clause, "Force Majeure" means an event beyond the control of the service provider and not involving MPCB or Service Provider's fault or negligence and not foreseeable. Such events may include, but not restricted to wars, revolutions, epidemics, natural disasters etc.

If force majeure situation arises, the service provider shall promptly notify MPCB in writing of such condition and cause thereof. Unless otherwise directed by MPCB in writing, the service provider shall continue to perform its obligations under contract as far as possible.

17. LEGAL JURISDICTION

All legal disputes are subject to jurisdiction of Mumbai courts only.

18. EXHIBIT – 1

FORMAT OF THE COVERING LETTER

(The covering letter is to be submitted by the Bidder along with the Cover 1 of the Bid)

Date: Place:

To,

Member Secretary Maharashtra Pollution Control Board Kalpataru Point, 3rd floor, Opp. Cine Planet Cinema, Sion Circle, Sion (E), Mumbai – 22

Dear Sir,

Sub: Selection of System Integrator for Data Centre Core Infrastructure Modernisation

Please find enclosed one (1) original + one (1) copies of our Bid for "Selection of System Integrator for Data Centre Core Infrastructure Modernisation" in response to the Request for Proposal (RFP) Document issued by MPCB dated

We hereby confirm the following:

- 1. The Bid is being submitted by *(name of the* Bidder) who is the Bidder in accordance with the conditions stipulated in the RFP.
- 2. We have examined in detail and have understood the terms and conditions stipulated in the RFP Document issued by MPCB and in any subsequent communication sent by MPCB. We agree and undertake to abide by all these terms and conditions. Our Bid is consistent with all the requirements of submission as stated in the RFP or in any of the subsequent communications from MPCB.
- 3. We have enclosed the EMD as per the RFP terms.
- 4. The information submitted in our Bid is complete, is strictly as per the requirements as stipulated in the RFP, and is correct to the best of our knowledge and understanding. We would be solely responsible for any errors or omissions in our Bid.
- 5. We as the Bidder (Please strike out whichever is not applicable), designate Mr/Ms (mention name, designation, contact address, phone no., fax no., etc.), as our Authorized Representative and Signatory who is authorized to perform all tasks including, but not limited to providing information, responding to enquiries, entering into contractual commitments etc. on behalf of us in respect of the Project.

For and on behalf of: Signature: (Authorized Representative and Signatory) Name & Designation of the Person:

19. EXHIBIT – 2

FORMAT FOR COVERING LETTER SUBMISSION- WITH PRICE BID

(The Price Bid should be submitted along with the following cover letter. Format of Price Bid is given in Annexure - 4)

Date: Place:

To,

Member Secretary Maharashtra Pollution Control Board Kalpataru Point, 3rd floor, Opp. Cine Planet Cinema, Sion Circle, Sion (E), Mumbai – 400 022

Dear Sir,

Sub: Selection of System Integrator for Data Centre Core Infrastructure Modernisation

As a part of the Bid, we hereby make the following price offer to the MPCB.

The cost of the services to be provided as per the requirements stipulated in this RFP is mentioned in the Price Bid as per **Annexure – 4 o**f the RFP. The price quoted is for the Scope of work as defined in Annexure 2.

We agree to bind by this offer if we are selected as the Successful Bidder.

For and on behalf of:

Signature (Authorized Representative and Signatory of the Bidder):

Name of the Person: Designation:

20. EXHIBIT – 3

MANUFACTURER'S AUTHORISATION FORM

(This letter of authority must be on the letterhead of the Manufacturer, must be signed by a person competent and having the power of attorney to bind the Producer, and must be included by the Bidder in its bid as specified in the Instructions to Bidders.)

Date: Place:

To,

Member Secretary Maharashtra Pollution Control Board Kalpataru Point, 3rd floor, Opp. Cine Planet Cinema, Sion Circle, Sion (E), Mumbai – 400 022

Dear Sir,

WHEREAS <Name and address of the Manufacturer> who are official producers of <description of the respective equipment> do hereby authorize <name of the Bidder> located at <Address of the Bidder> (hereinafter, the "Bidder") to submit a bid of the following Products produced by us, for the Supply Requirements associated with the above Invitation for Bids. When resold by Name of the Bidder>, these products are subject to our applicable standard end- user warranty terms.

We assure you that in the event of <Name of the Bidder>, not being able to fulfil its obligation as our Service Provider in respect of our standard Warranty Terms, we would continue to meet our Warranty Terms through alternate arrangements.

We also confirm that <Name of the Bidder> is our authorized Service Provider / System Integrator and can hence provide maintenance and upgrade support for our products.

Name In the capacity of Signed Duly authorized to sign the authorization for and on behalf of : ______ Dated :. 21. ANNEXURE – 1

CURRENT INFRASTRUCTURE DETAILS

Server Infrastructure: Following are details of the current servers and the applications hosted on the same. It is required that these applications in physical server environment are migrated to a virtual server environment on the modernized hardware platform and Virtualisation Software proposed. The Media Server should remain Standalone server.

Sr	Server Used For	Ir	nstalled Software	Server Model	
No	Server Used For	OS	Applications	Server would	
1	Domain Server	WIN2K3 X64 Std	Active Directory of MPCB	Sun X4150	
2	Mail Server	WIN2K3 X64 Ent	Exchange Server 2007	Sun X4450	
3	Internet Proxy	Cent OS	Squid Proxy	Sun X4150	
4	Media Server	WIN2K3 X64 Std	Symantec Backup Exec 12.5	Sun X4150	
5	IMIS DB Server	WIN2K3 X64 Ent	SQL Server 2005	Sun X4450	
6	Antivirus Server	WIN2K3 Std	McAfee EPO 4.5	Sun X4150	
7	IMIS Apps Server	WIN2K3 X64 Ent	IMIS Apps server	Sun X4450	
8	ADC	WIN2K3 X64 Std	DHCP Service	Sun X4150	
9	LIMS Test Apps	WIN2K3 Std	LIMS Test Apps	Sun X4150	
10	LIMS Apps	WIN2K3 Std	LIMS Apps / Jaguar Server	Sun X4150	
11	LIMS Database	WIN2K3 X64 Std	Oracle 10 g / LIMS Database	Sun X4450	
12	File Server	WIN2K8 X64 Std	File Server Services	Sun X4150	
13	Patch Mgmt server	WIN2K8 X64 Std	Patch Mgmt Service	Sun X4150	
14	IMIS BKP Server	WIN2K3 X64 Ent	IMIS BKP Server	Sun X4150	
15	FAS Apps	WIN2K8 X64 Std	Financial Acc Software Apps	IBM X3650	
16	FAS DB	WIN2K8 X64 Std	Financial Accounting s/w DB (MS SQL)	IBM X 3650	
17	MIDC application	Windows	MIDC application	HP ML 350 G4	
18	Common Folder	Windows		HP ML 150	
19	Oracle Restoration	Windows	Oracle Restoration	HP ML 350 G5	

Storage Infrastrucutre : Followig is the existing storage hardware where the data is stored. The same needs to be restored on the new Storage Infrastrucutre.

Sr No	Storage Name	Storage Capacity	Used Capacity	Nos. of Disk Installed	RAID Config
1	SUN StorageTEK 6540 array with controller Module	1.602 TB	1.283 TB	12 Nos * 136 GB	RAID 5
2	Fiber Channel Switch	Brocade SW200E(16 Port, 8 Enabled)			

Backup Infrastructure : Exissting backup infrastructure is as follows

Sun SL48	SUN StorageTek SL48 tape library with 48 slots,
autoloader	4 Gb FC interface 6540 CONTROLLER MODULE
autoloadel	1 HP LTO3 drive

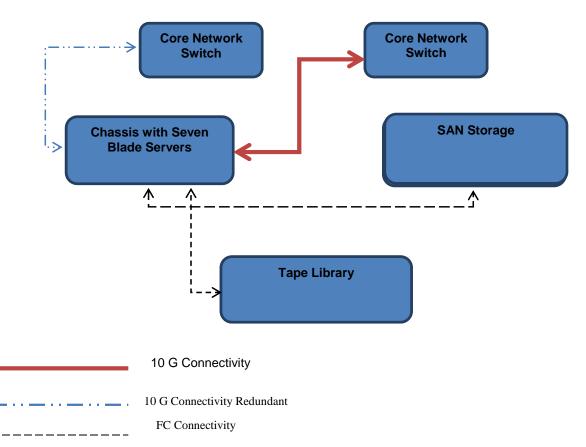
22. ANNEXURE – 2

PROPOSED SOLUTION DESIGN and SCOPE OF WORK

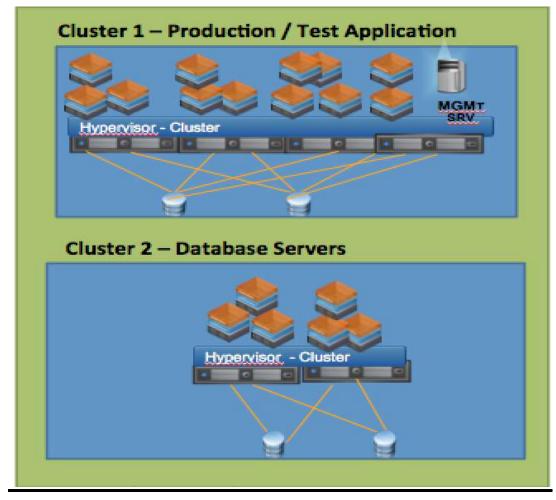
1.0 PROPOSED SOLUTION DESIGN

1.1. Proposed physical connectivity

The schematic below gives the proposed and required physical connectivity of the hardware to be supplied. Various components of the infrastructure are depicted along with the connectivity paths.



The Bidders are required to mount the equipment in the Equipmet Rack already available with MPCB. The equipment distribution should optimize the Power distribution per rack and also the total number of equipment racks. It is expected that the number of racks after the migration is 2. The broad description of the components is given from 1.3 onwards in this annexure.



1.2 Proposed Architecture Post Virtualization

1.2.1 Key highlights of the solution

- 1. Cluster approach :
 - a. It is proposed to have two separate clusters. One dedicated for Application Servers and the other dedicated for Database Servers.
 - b. Two clusters will ensure better reliability due to less dependence on each category. Additionally it provides flexibility to organized growth in two separate categories in future .. one for applications and other for database.
- 2. Robust design :

The clusters will be configured in a N+1 configuration where N represents the number of physical servers in the respective cluster. In case of failure of one

of the physical servers in the cluster, the load (resource allocation for the applications) will be seamlessly transferred to the other servers.

3. Scalable design:

It is proposed to have total FOUR (4) physical servers in the Application cluster and TWO (2) physical servers in the Database cluster. These physical servers will host the current Database and Application servers (totaling to current 18 servers) in a virtualized environment.

- 4. Management console for monitoring and administration of the virtualized environment.
- 5. A separate dedicated server will be used for Backup software.

The detailed specifications for the Virtualisation software can be found at Annexure - 3, which need to be complied with.

1.3 Components of the Core Infrastructure

1.3.1 Server Infrastructure

It is proposed to have a single blade server chassis. The chassis should be scalable to host additional servers other than those proposed currently.

Proposed Minimum Physical Server Configuration:

- CPU 2.4 Ghz 2 X 6 Cores
- RAM 64 GB expandable to 256 GB
- NIC 4 / 6 with 10 Gbps
- HBA 2 nos

In addition to these features, the Blade chassis needs to have

- sufficient redundancy features, redundant power supply
- redundant cooling options
- optimized energy consumption

The detailed specifications for the Blade Server Chassis and Blade Server Configuration can be found at Annexure - 3, which need to be complied with.

1.3.2 Storage infrastructure

A Storage Area Network (SAN) is proposed as a part of the solution. The SAN device needs to be connected to the Server Infrastructure through SAN switches over fiber channel connectivity. Redundant connectivity to Serve infrastructure is required

Broad minimum specification of the SAN

Total storage capacity	: 200 TB
Usable storage capacity	: 15 TB

Disk redundancy support	: RAID 6
Connectivity	: Fiber Channel
Other redundancy features	: Network Interfaces
-	dual RAID controllers
	battery backed controllers
	power supplies
	redundant connectivity path to Servers

The detailed specifications for the SAN Storage can be found at Annexure - 3, which need to be complied with.

1.3.3 Backup infrastructure

Currently MPCB has a working backup infrastructure, which enables a regular scheduled data backup. The solution has two components

1.3.3.1. Automated backup software solution

The current software is working properly and hence it is proposed not to change the backup software. Since there are no additional servers being proposed at this stage **there is no need to provide any additional licenses.**

1.3.3.2 Tape Library

It is proposed to have a minimum LTO 5 based solution with multiple tapes with suitable connectivity to the server Infrastructure. The hardware has to be compliant and compatible with the current backup software at MPCB.

The detailed specifications for the TAPE LIBRARY can be found at Annexure - 3, which need to be complied with.

1.3.4 Core Network switches

The network switches are required for ensuring a faster copper connectivity of the servers to the network. We propose TWO (2) Network switches which will be working as redundant and load balancing mode.

Broad minimum specifications for the core Network switches are proposed as follows

Minimum number of ports	: 24 copper
Port speed	: 10Gbps
Routing	: Layer 3 and 4
Min redundancy features	: Dual power supply
	Redundant fans
The detailed specifications	for the CORE NETWORK SWI

The detailed specifications for the CORE NETWORK SWITCHES can be found at Annexure - 3, which need to be complied with.

2.0 SCOPE OF WORK

2.1 Stakeholders and their responsibilities

There are THREE (3) stakeholders in the project viz. MPCB, System Integrator (SI), Project Management Consultant (PMC). Broad roles of each of the stakeholder is mentioned below.

MPCB as the project sponsor will ensure access to the facilities and facilitate information regarding the existing infrastructure. The Board understands that there may be various other agencies involved in the migration process and will ensure that the same are available during the process of migration based on requests by the SI within a reasonable timeframe.

The System Integrator (SI) is responsible to migrate the current infrastructure of the MPCB Data Centre (Servers, SAN, Core Network Switches, Backup and all Applications and Databases) from existing setup to a virtualized environment. It may be noted that the migration exercise will require handshaking with many other devices / equipment already existing within the Data Centre such as Power Conditioning Equipment, Access switches, Routers and MPLS links, Firewall and other security appliances, etc.

The System Integrator is mandated to ensure a seamless migration to the modernized setup in a transparent manner so that any external agencies (including MPCB users) interfacing with the Data Centre infrastructure do not experience any change of interface. The Migration will be deemed complete and successful upon testing ALL the application of MPCB for their operations and by having printing of the test results.

Project Monitoring Consultant (PMC) will be appointed by MPCB and will be the nodal agency to monitor the project progress and coordinate between MPCB, SI and other related agencies.

The responsibilities of each of these stakeholders (SI, MPCB and PMC) are broadly outlined here. These should be taken as broad guidelines only and mentioned here for necessary resource planning by the Bidders. However, as mentioned earlier, the Scope of Work for the successful bidder i.e. System Integrator (SI) will be to supply the equipment, install and commission the same to ensure that the existing operations of MPCB continue operating the same way as before post-migration in a transparent manner to the MPCB users and other external interfacing agencies. The Certificate of Operation (CoOP) will be issued to the SI only upon satisfactory completion of the Scope of Work which maybe substantiated by necessary documentation.

For the sake of convenience of the Bidders, the Scope of Work is further elaborated as below. The same should be taken as general guidelines and not an exhaustive list.

2.2 Responsibilities of the System Integrator

2.2.1 Preparation

- 1. Understand the current infrastructure setup of MPCB Data Centre along with layout, configurations and working.
- 2. Submit the implementation plan to MPCB for review and finalization of the same with inputs from the Project Monitoring Consultant (PMC) appointed by MPCB. The plan needs to highlight delivery, installation, roll-back plan, downtime requirements, resource deployments, dependencies, etc. on a time scale. Please note that since this is a migration of a LIVE Data Centre, the transition to the new setup has to be seamless and with minimal downtime, especially during the working hours of the Board.
- 3. Prepare a micro-level Virtualisation plan along with testing of the same and get the same approved.
- 4. Prepare a "BEFORE and AFTER" layout of the Equipment Racks and get the same approved from PMC. The Layout should optimize the power distribution per rack and ideally categorize the equipment for ease of management and cable routing. It is expected that the total rack count may be reduced from existing THREE (3) to proposed TWO (2)
- 5. Preparation of Disk Partitioning plan for Servers and Storage infrastructure and finalize the same with the PMC.

2.2.2 Delivery of Equipment

- 1. Delivery of the equipment as per the Work Order / Contract. The delivery may be prioritized as per the schedule.
- 2. Testing of the equipment before installation and ensure replacement in case of receipt of defective equipment at site.
- 3. Get Delivery Acknowledgement from PMC before the installation.

2.2.3 Installation of Equipment

- 1. Testing and ensuring Power Distribution as per the proposed deployment plan.
- 2. Mounting of the Blade Servers in the Chassis and Mounting the same in the Equipment Rack
- 3. Mounting of the SAN infrastructure and ensuring its connectivity with the Server Infrastructure over Fiber Channel, along with the necessary redundancy options deployed.
- 4. Configuration of RAID 1 on each of the Servers and RAID 5 / 6 on the SAN infrastructure, with necessary partitioning as per the approved plan.
- 5. Installation and configuration of the Server Management software and other Management features for the SAN, to ensure necessary proactive alerts and health parameters are being monitored.
- 6. Convert the existing Physical Server infrastructure to a Virtualized server environment. Create the required Virtual Instances as per the proposed architecture (Application Cluster and Database Cluster) with N+1 redundancy as mentioned in the Solution Design in section 1.2 of this Annexure. Set up alerts for anomaly behaviour in the infrastructure.

- 7. Migrate the entire current configurations for all applications Active Directory, MS Exchange, IMIS, etc. to the new hardware so that the MPCB operations work in the same way as per the old setup.
- 8. Migrate the existing data to the new infrastructure.
- 9. Install the existing Data Backup software to the new Blade server infrastructure along with the existing policies.
- 10. Redressing of the network cables (Equipment Rack end) based on the revised equipment distribution plan.
- 11. Configuration of the New 10 G Network Switches to ensure continuance of the existing VLANs.
- 12. Establish the connectivity of the switches with the Servers to ensure redundant connectivity.
- 13. Installation of Tape Autoloader and configuration of the same so that the existing backup arrangement is maintained.

2.2.4 Documentation

- 1. The Bidder is required to ensure the documentation of the entire modernised infrastructure as a part of handover exercise.
- 2. The documentation to include
 - a. Rack layout clearly showing the equipment being mounted
 - b. Network Switches : nomenclature, IP addresses, configurations, port mapping to Patch panels / Servers / network devices, password
 - c. Server details : nomenclature, IP addresses, configurations, threshold parameters for the monitoring / management software, passwords
 - d. SAN storage : configuration, nomenclature, partitioning details
 - e. Virtualisation : virtual servers with resource allocation

It may be noted that the CoOP will be awarded only after receipt of the documentation acceptable to MPCB.

2.2.5 Support

- 1. The System Integrator is to provide support for the equipment supplied for a period of THREE (3) years from the date of CoOP.
- 2. For Hardware : The support should be comprehensive (all parts included) and on-site. In case of any faulty components, the same should be replaced in a maximum timeframe of SIX (6) hours from the time of incident being reported.
- 3. For Virtualisation Software: The L1, L2 and L3 support should be made available. Support should be provided by the System Integrator. However, System Integrator should have back to back support from the OEM directly without any third party involved. The key activities in the support phase will be as follows
 - a. Detailed Management and Administration of setup at Primary site
 - b. VM creation, Managing Network and Storage Policy for the VMs
 - c. Monitoring VMs, Network and Storage as per compliance
 - d. Monitoring setup for any contention or fine tuning
 - i. Determining Over-provisioned VMs
 - ii. Determining Under-provisioned VMs

- iii. Determining Idle and Powered-off VMs
- iv. Provide recommendation for fine tuning and implement the same
- e. Respond to alerts for anomaly behaviour in the setup and take corrective actions
- f. Release and reallocate resources as per application requirement
- g. Implement OS hardening and compliance policies
- h. Troubleshooting and fixing issues
- i. Provide on-site 24 x 7 On site Support for the setup

2.3 Responsibilities of MPCB

- 1. Facilitate access and information availability to the Project Management Consultant (PMC) and the System Integrator (SI)
- 2. Acceptance of the Implementation schedule provided by SI after due review with PMC.
- 3. Ensuring availability of the downtime based on the implementation schedule on reasonable notice given by the SI after consultation with PMC
- 4. Ensuring data backup for the servers and storage being migrated.
- 5. Ensuring support availability from the respective Vendors for the Application Software at the time of Migration to Virtualized environment.
- Ensuring availability of various vendors such as Civil and Electrical Contractors, Network Contractors, Security Contractors, MPLS Service Providers, Application development partners, current Service Providers, FMS service providers and any other agency – internal and / or external, as may be required for the successful migration.
- 7. Facilitate Power Distribution from the Mains Supply to the existing UPS and from UPS to the Equipment Rack as per the required Power Distribution as proposed by SI.
- 8. Ensuring availability of ALL the existing licensed software (applications, database, Operating System, etc.) with their ORIGINAL Media (DVD / CD) and License / Registration codes, drivers, etc. which may be required for the implementation.
- 9. Issue of CoOP upon receipt of satisfactory project implementation and documentation.

2.4 Responsibilities of the Project Monitoring Consultant (PMC)

- 1. The PMC will be responsible for overall coordination between MPCB and SI.
- 2. PMC will review the implementation plan for improvements, if any.
- 3. Checking of the equipment delivery
- 4. Review of the documentation being submitted by the SI
- 5. Review the project progress and monitor the timelines
- 6. Escalate issues, if any, to MPCB management

23. ANNEXURE – 3

TECHNICAL SPECIFICATIONS AND COMPLIANCE

Bidders to fill in the Compliance details and include the same in Cover-1 Technical Bid

		BLADE SERVER CHASSIS : QTY 1		
Sr. No.	Parameter	Specifications	Compliance (Y/N)	Remark
1	Form Factor	Maximum 10U Chassis to accommodate min 16 Blades		
		Provision for min 3 I/O Module bays in redundant mode		
2	Back Plane	Redundant backplane if active or single passive backplane		
	Redundant	Min 16 autosensing 1/10Gb ehternet copper ports with 4		
3	(2) Pass	external integrated 1/10 Gb Ethernet ports per switch		
Ũ	Through	Each Switch fabric of 480 Gbps aggregate bandwidth		
	Switches	Layer 3 routing capability		
4	FC Switch	With sufficient ports To connect the SAN in HA mode		
		Multi-chassis stacking view capability – min 9 chassis -		
		from single console. All chassis visibility on single web with		
	Management	single sign on through LDAP / AD to access other chassis		
5	Controller	Mgmt software should be component of chassis mgmt		
Ũ	(Management	controller firmware with no agents required to manage		
	Module)	Cluster chassis via a standard network across data center		
		OS independent blade BIOS / FW update and configuration		
		Feature to enable cloning of Server, Chassis properties		
6	Power	Redundant Fully Populated hot plug Power Supplies (N+N)		
-	Supplies	Should be 80 Plus Platinum Certified		
7	Fans	Hot plug Redundant Fully Populated cooling fans		
8	Blade Server	The enclosure offered should support Intel Xeon and AMD		
Ŭ	support	processor based Blade severs.		
9	Management	Status/Inventory/Alerting for Blades, Chassis Infrastructure, & IOMs; Centralized Configuration; GUI & CLI; SSL/SSH ;Power/Thermal Monitoring; Dynamic power engagement; Temperature monitoring; Persistent WWN/MACShould allow user to lock a WWN/MAC address into specific blade slot. Unique pool of WWN/MAC's to be stored in Chassis Management Module ;IP address per remote management acrid Virtual Madia 8 (4) (MA Consulting Lange 8 AD		
10	Network	card; Virtual Media & vKVM; Security - Local & AD Support any of I/O technologies - Ethernet, 10G Ethernet,		
10	Connectivity	4/8/16 GB FC, Converged Networks, Infiniband QDR / FDR		
11	I/o Module	Capability to support any of the I/O modules - Switch		
	Support	modules or Pass-thru modules		
		Real time, actual power consumption (aggregate chassis &		
		individual blade) High/Low "watermarks"		
		Optional user selectable chassis "power ceiling" with policy		
	Power	Alert on Ceiling – sends an alert if ceiling is reached		
12	Management	Throttle on Ceiling – lower proc /memory frequency to		
		reduce consumption		
		Slot based Power Prioritization		
		User settable priorities, works with "power ceiling" feature		
		Should be compliant with the PMBus Specification 1.1		
	Chassis	Deployment Wizard , Chassis, blade, & I/O module		
13	LCD/control	information & alerts , Front VGA and 2 USB ports for KVM.		
	panel, KVM	Should be integrated with a KVM switch		
14	Accessories	All accessories such as HBA's, cables etc required to		
14		complete Installation should to be bundled in the product		
15	Warranty	3 Yr Onsite; 24x7, parts replacement assurance of 6 Hrs		
16	OEM Market	The OEM should one of the Top 3 OEMs for Market Share		
10	Share	in the X 86 Server Space as per the Latest IDC report)		

		Blade Server – QTY 7		
Sr. No.	Parameter	Specifications	Compliance (Y/N)	Remark
1	Processor	Support for latest Intel Processors - Haswell E5-2600 v3 min 2.2 Ghz (Minimum 2 Processors required)		
2	Proc Sockets	Min 2 Populated		
3	Max Cores / Socket	Up to 6 or more		
4	Chipset	C600 family Chipset		
5	Form Factor	The Server should be either Full Height, Half Height Compatible with the Chassis / Enclosure quoted		
6	HDD	Hotplug and Support SAS/SATA/SSD/PCIe SSD. 2 x 1 TB Drives of minimum 10 K spindle speed		
7	Availability	Should Support hot-plug hard drives, ECC memory, Single Device Data Correction (SDDC),supports memory demand and patrol scrubbing, High availability failover cluster support		
8	Memory	Ability to remove or retire a range of memory addresses dynamically by using the operating system, without requiring system reboot (upgradable to 196 GB DDR 4) 64 GB RAM Minimum to be provided		
9	Mezz. Slots	Two x8 PCI Express Gen-3 mezzanine card slots		
10	NIC/ Ethernet Ports	Min. 2 x 10 Gbps Ethernet Port ; supports Switch independent Network Partioning		
11	FC HBA	Min. 1 Dual Port Card - 8 Gbps		
12	USB	Min. Total 3 USB ports (min. 2 external)		
13	Video Controller	Min. 16 MB Memory on video Controller		
14	Cooling	Support peak excursion temperature rating of 45° C		
15	Remote Management	Remote Management with Dedicated Management /Network Interface port 1Gbps The remote management port should support IPv4,IPv6, VLAN Tagging, DNS and Dynamic DNS		
16	System Management	Web GUI Monitoring of Servers Agent free Server Monitoring Update of System Software Integration with OEM support to update the Server Configurator, Remote Management Controller, RAID Controller, BIOS, NIC, and Power Supply Diagnostic tools embedded on the system Scripting Capability and support for command line, Scripting with remote Racadm Secure operation of remote access functions including authentication, authorization, and encryption Remote Media Access with Virtual Media Remote video,keyboard,mouse control with Virtual Console Sensor Monitoring and Alerting		

1		Real time Power Monitoring	
		Power monitoring accuracy to within 1%	
		Ability to capture last crash screen, support Crash video playback	
		should Support Out-of-band operation	
		PK and Two Factor Authentication	
		Millisecond power capping & platform power monitoring	
		Directory Services support	
		Supports Remote Syslog	
		Easy access to interactive demos and information about the Server online using QR code, smart phone	
		Automatically update the firmware of replaced hardware parts	
17	O. S. and Virtualisation Support	Microsoft Windows Server 2008, Novell SUSE Linux, Red Hat Linux Enterprise, Vmware, Hyper V	
18	Accessories	All accessories such as HBA's, cables etc required to complete the Installation need to be provided along with server	
19	Warranty	3 Yr Onsite; 24x7, parts replacement assurance of 6 Hrs	
20	OEM Market Share	The OEM should one of the Top 3 OEMs for Market Share in the X 86 Server Space as per the Latest IDC report)	

	SAN STORAGE – QTY1				
Sr. No.	Parameter	Specifications	Compliance (Y/N)	Remark	
1	SAN Storage Model	Must have Fibre Channel Front-end & SAS (6Gbps) back- end architecture. Should not be SAN emulated on File System. Architecture should allow modular upgrades of hardware and software			
2	Spindle Flexibility	Array should support following spindles: 300GB, 600GB 15K RPM & 600GB, 900GB 10K RPM 6Gbps disks, 1TB, 2TB 7200 RPM, 6Gbps SATA II / FATA / NL SAS. Should support SSD drives. Support for mix-match of different type of spindles			
3	Array Architecture	Should be equipped with N+N (min 2) array controllers) Provide block level virtualization of all drives within SAN. No RAID Groups/ other drive isolation requirements. Should be provided with min. 32GB cache Upgradeable to 128GB within same controller pair Native support for 1GB & 10GB iSCSI front-end ports. Should be able to place less frequently accessed data on the inner tracks of the drives. Support synchronous, asynchronous replication. Replication must be bi-directional to support multiple replication options.			
4	Array Features (If any of the features mentioned requires license the same should be included as part of the BOM and Pricing)	Intelligently restripe data as disks are added to optimize performance. Boot from SAN - Allow diskless servers to share storage resources and boot from the SAN. Allocate space based on actual data written (Thin Provisioning). Should be configured with snapshot features and must support continuous, unlimited snapshots Should be configured with Data Tiering features. Should be configured with Performance Monitoring Software Must allow RAID levels change on the fly without taking down server to which volume is attached. Must allow any LUN provided to a system configured with multiple types of server connectivity (fiber channel or iSCSI or FCoE) and must be capable of mapping volumes from one connectivity type to the other without changing or copying the data.			
5	Storage Configuration & capacity	Storage should be configured with Min. 8 x 8Gbps FC Front-end Ports & Min. 8 x 6Gbps SAS Back-end Ports 5TB Useable in RAID6 (4D+4M) using 15K rpm 6Gbps SAS drives HotSpare Quantity 1 from each type of disk other than useable disks mentioned above If the Storage OS resides on Disks the same should be considered as additional disks Data Tiering should be configured across the Disk Type & RAID Type			

_		Data Centre Core initiasti ucture Modernisation	
6	Storage scalability	The array should be scalable to a minimum of 450 disks of the offered configuration of the disk count behind the same controller pair by adding the appropriate number of spindles and disk shelves	
7	Cache Protection	Cache should be mirrored between the Active-Active controllers (load balancing). Must support either Cache battery backup for a minimum of 72 hours or fully automatic de-stage of cache to disks/Flash during power failure to prevent possible data loss.	
8	No single point of failure Architecture	Storage Array should be configured in a No-Single-Point- of-Failure Architecture i.e to have multiple paths and multiple RAID controllers	
9	OS Support	Industry leading Operating System platforms including: Windows Server® 2003, Windows Server® 2008, Sun Solaris®, HP-UX®, IBM-AIX®, Linux® 2.6 and above, RHEL-5®, VMware®, Hyper-V®.	
10	RAID level support	Storage system to support HARDWARE based RAID only. Must support various Hardware RAID levels such as 0, 10, 5 and 6 (Dual Parity Protection). Must support inter-mixing different RAID groups within one storage system.	
11	Online LUN migration for flexibility of redeployment	Should support online LUN/Volume migration (transparent movement of volumes within the array). The functionality should allow cross RAID migration and cross spindle migration (e.g. FC to SATA)	
12	Array Management	Entire system must be manageable from a web-based single, secure interface without requirements for a separate management device or server. Management system must include comprehensive online and remote monitoring abilities without third party hardware or software. Display current and historical allocation of disk storage by tier of storage and RAID level At-a-glance, comparable views of current aggregate capacity statistics and overall storage resource objects for all SANs of same series from the vendor	
13	Controller software and Non-Disruptive Upgrade	Firmware should be upgradeable for functionality improvement and enhancements. Must support non- disruptive upgrade of core software, BIOS, snapshot, clone, remote mirroring and management software without shutting down storage system.	
14	Accessories	All accessories such as HBA's, cables etc required to complete the Installation should be bundled and supplied	
15	Controllers upgrade	Must allow online expansion of controllers without affecting system performance/data availability to users.	
16	Support	3 Yr Onsite; 24x7, parts replacement assurance of 6 Hrs	

		SAN SWITCH – QTY 2		
Sr. No.	Parameter	Specification	Compliance (Y/N)	Remark
1	No. of Ports	Minimum 8 ports licensed, scalable to minimum 12 ports		
	Port performance	Minimum 4 Gbps line speed in full duplex mode		
2		Auto-sensing 1, 2, 4 and 8 Gbps port speeds		
		Option of programming to fixed port speeds		
3	ISL Trunking	Frame based trucking with up to 8 ports per trunk		
4	Fabric latency	Maximum 700 ns with no contention, cut through routing at 8 Gbps		
5	Frame size	Maximum 2112 byte payload		
6	Frame buffers	700 dynamically allocated, maximum per port : 484		
7	Fabric switches support	Unicast, Multicast and broadcast		
8	Management	HTTP, SNMP v1/v3 (FE MIB, FC Management MIB), Telnet; auditing, change management tracking, Syslog		
9	Security	DH-CHAP (between switches and end devices), HTTPS, IPsec, IP Filtering, LDAP, Port Binding, RADIUS, Role-Based Access Control (RBAC), Secure Copy (SCP), Secure RPC, SSH v2, SSL, Switch Binding, Trusted Switch		
10	Diagnostics	POST and embedded online/offline diagnostics, including RAStrace logging, environmental monitoring, non-disruptive daemon restart, FCping and FC traceroute, port mirroring (SPAN port)		
11	Management Access	10/100 Ethernet (RJ-45), in-band over Fibre Channel; serial port (RJ-45); USB; call-home integration enabled through Brocade DCFM, EFCM, and Fabric Manager		
12	Accessory	To be supplied with 15M LC-LC cables for all populated ports		
13	Form Factor	1 U Rack Mountable		
14	Warranty	Minimum 3 (Three) Years On-site comprehensive warranty. SI must offer 24x7x365 Hardware and Software support		

	TAPE LIBRARY – QTY 1					
Sr. No.	Parameter	Specifications	Compliance (Y/N)	Remark		
1	Recording Format	LTO Ultrium Generation 5				
2	Form Factor	Rack Mount				
3	Slots	Should support minimum 8 slots				
4	Capacity	1.5 TB GB (native) 3 TB (compressed)				
5	Interface	6 GB SAS / FC (Relevant interface cards to be supplied along with the server)				
6	Media	23 Nos of LTO-5 Data Cartridges and 1 Nos. of Cleaning Cartridges to be supplied along with the Autoloader				
7	Transfer Rate	UPTO 140Mbps				
8	OS Support	Windows 2003 / 2008 server, Windows 2008 storage server 32 bit and 64 bit, RHEL 4.7 and above 32 bit and 64 bit SUSE linux 9 and 10				
9	Accessories	All accessories such as HBA's, cables etc required to complete the Installation need to be provided along with the Tape drive				
10	Hardware and Software Support	3 Years On site 24x7 support for Hardware and free patches and major version upgrades to all software capabilities that are mentioned above. The warranty for the software should also be provided for 3 years and should Include any patches or upgrades released during this period.				

Sr. No.	Parameter	Specifications	Compliance (Y/N)	Remark
		The switch should have Minimum 24*10/100/1000 T		
		Ethernet Ports + 4*10G SFP+ Ports.		
		• 10G SFP+ Supported include SR, LR,		
1	1 Interface	1G SFP Supported include T, SX, LX		
•	Options	1 RS232 Serial Console Port	-	
		• 1 USB Port, 1 out of band Ethernet management port,		
		4x10G SFP+ SR transceivers to be loaded on the Switch		
2	Redundancy	Must Provide external redundant power supply		
3	Latency	Maximum Latency upto 3.3 microseconds or lower		
4	Architecture	Cut through architecture, Non-Blocking, Wirespeed		
4	Architecture	100% Line-Rate Performance, Non-blocking architecture		
5	Performance	with 200 Gbps (Full Duplex) Non-Blocking Switching		
5	renormance	throughput with 96 Mpps forwarding rate		
		802.1x with VLAN assignment, Private VLAN edge		
		RADIUS, TACACS+, HTTP/HTTPS, Wire Speed Filtering		
		Minimum 128 ACLs, Port based ACLs, ACL Logging,		
		MACLs, SSH v1, v3, Secured Passwords		
•		RADIUS Authentication (including support for		
6	Security	MGMT/ETX11 authentication)		
		HTTPS Secure BBI, Mac notification, Dual Software		
		images		
		BBI over HTTP IPv6, BBI over HTTPS IPv6,SSH IPv6,		
		Shift-B Boot Menu, USB Boot, UDLD, UDLD		
		Enhancements for errdisable		
7	VLANs	Should support minimum 512VLANs with 4K VLAN IDs,		
7	VLANS	Port-based VLAN, 802.1q tagged VLAN, Private VLAN		
		Should support trunking protocols such as LACP, Static		
		Trunks, Configurable Trunk Hash algorithm, Trunk Ports		
		Statistics, Cisco Ether channel (static trunking)		
8	Trunking	Trunk hash (non-Draco), Trunk Hashing support (RTAG		
0	Indiking	7), static link aggregation		
		Virtual link aggregation groups to increase network		
		bandwidth		
		Should support Multiple Spanning Tree (802.1s), Rapid		
9	Spanning Tree	Spanning Tree (802.1w), PVRST+		
9	Spanning free	Auto STG assignment		
		Should support following QoS features such as IEEE		
10	Quality of	802.1p, FlowControl, DiffServ, Weighted Round Robin		
10	Service	,egress queuing		
		Metering, In-profile and out-of-profile packet remarking,		
		Rate limiting		
11	High	Virtual link aggregation groups for high availability		
-	Availability	Hot links, Hotlinks for LACP, dedicated stacking		
		IGMP v1, v2, v3 Snooping with 2K IGMP groups		
12	Multicast	Monitoring		
		Port Mirroring, ,IGMP Querier		
		Traceroute IPv6, Telnet IPv6, TFTP IPv6, DNS Client		
13	IP V6	IPv6,Syslog Host IPv6,NTP Server IPv6,Management		
	1	IPv6 Interface, Management IPv6 Default Gateway		

		IPv6 Interface, IPv6 Default Gateway, BBI over HTTP IPv6, BBI over HTTPS IPv6, SNMP Agent IPv6, Management Support on data ports (IPv4/IPv6)	
14	Clients	CLI, Browser-based client, SSH, or Telnet	
15	Standard Protocols	SNMP v1, v2c, v3, RMON, NTP Support, Accept DHCP, RIP, OSPF LLDP, 16 K MAC Table, 12K Jumbo Frames, 802.3X	
		Flow Control	
16	Warranty	3 Years Comprehensive On site Warranty on both Hardware & Software	

Sr. No.	Parameter	Specification	Compliance (Y / N)	Remark
1	Bare Metal Support	Shall provide a Virtualization layer that sits directly on the bare metal server hardware with no dependence on a general purpose OS for greater reliability and security		
2	Processors supported	Shall have the capability to create Virtual servers with up to 128 processors in virtual machines for all the guest operating system supported by the hypervisor		
3	OS Support	Shall allow heterogeneous support for guest Operating systems like Windows client, Windows Server, Linux (at least Red Hat, SUSE, Ubuntu and CentOS, Solaris x86)		
4	Templetisation	Shall have the capability for creating virtual machine templates to provision new servers		
5	Smart card support	Shall support connecting smart card readers to multiple virtual machines, which can then be used for smart card authentication to virtual machines.		
6	Dynamic Power Management	Should provide dynamic power management such that in case of during off peak hours not all servers are required to be powered on due to less load it should place few servers in G2/S5 (Soft Off) power state as per the Industry Standard Advanced Configuration and Power Interface (ACPI) specifications to save power in an automated or manual or scheduled manner.		
7	High Availability	Virtualization software should have the provision to provide zero downtime, zero data loss and continuous availability for the applications running in virtual machines in the event of physical host failure, without the cost and complexity of traditional hardware or software clustering solutions.		
8	Monitoring	Virtualization software shall continuously monitor utilization across virtual machines and should intelligently allocate available resources among virtual machines		
9	Memory Management	Virtualization software shall allow RAM over- commitment that allows to configure virtual machine memory in such a way that safely exceeds the physical server memory.		
10	Remote Device support	Virtualization software shall allow usage of Remote devices which allow Installation of software in a virtual machine running on a server from the CD- ROM of a desktop		

	VIRTUALI	SATION SOFTWARE – HYPERVISOR LICENSE QTY: 1	2 PROCESSORS
	High	Should provide support for Microsoft Cluster Services	
11	availability	between virtual machines	
	· · · · ·	Should provide backup and recovery for virtual	
		machines which should allow admins to back up	
12	Backup and	virtual machine data to disk without the need of	
. –	recovery	agents and this backup solution should have built-in	
		variable length de-duplication capability.	
		Should provide in-built Replication capability to	
		enable array-agnostic replication of virtual machine	
13	Replication	data over the LAN /WAN. This should simplify	
	•	management enabling replication at virtual machine	
		level and enabling RPOs as low as 15 minutes.	
		Should support hardware as well as non-hardware	
14	Graphics	accelerated 3D graphics to run Basic 3D applications	
	support	in virtual machines.	
		Should be able to boot from iSCSI, FCoE, and Fibre	
		Channel SAN	
		Shall integrate with NAS, FC, FCoE and iSCSI SAN	
		and infrastructure from leading vendors leveraging	
		high performance shared storage to centralize virtual	
		machine file storage for greater manageability,	
		flexibility and availability	
		Should have the ability to thin provision disks to avoid	
		allocating all storage space upfront.	
		Should have the ability to live migrate VM files from	
		one storage array to another without any VM	
		downtime. Support this migration from one storage	
15	Storage	protocol to another (ex. FC, iSCSI, NFS, DAS)	
		Have High Availability capabilities for the virtual	
		machines i.e if in case one server fails all the Virtual	
		machines running on that server shall be able to	
		migrate to another physical server running same	
		virtualization software. This should be independent of	
		OS Clustering and should work with FC/ iSCSI SAN	
		and NAS shared storage.	
		Shall support built-in storage multi-pathing	
		Should provide abilities to offload specific storage	
		operations to compliant storage hardware thereby	
		performing these operations faster and consuming	
		less CPU, memory, and storage fabric bandwidth	
		Should provide a service-oriented and stateless	
		firewall to address security of the management	
16	Security	interface and helps manage firewall rules through a	
	-	familiar, service-oriented GUI. Should also support	
		additional capability to restrict access to services	
		based on IP address and subnet mask.	
		Should have in-built capability to deliver a proven endpoint security solution to any workload with an	
		approach that is simplified, efficient, and cloud-	
17	Endpoint	aware. Should enable 3rd party endpoint security	
17	security	solutions to eliminate the agent footprint from the	
		virtual machines, offload intelligence to a security	
		virtual appliance, and run scans with minimal impact.	
L	l	virtual appliance, and fun scans with minimal impact.	

Contd...

	VIRTUALIS	SATION SOFTWARE - HYPERVISOR LICENSE OTY 1	2 PROCESSORS
	VIRTUALIS	SATION SOFTWARE – HYPERVISOR LICENSE QTY 1 Should allow configuring each virtual machine with one or more virtual NICs. Each of those network interfaces can have its own IP address and even its own MAC address Must support NIC teaming for load sharing and redundancy. Ahall allow creating virtual switches that connect virtual machines Shall support configurations of 802.1q VLANs which are compatible with standard VLAN implementations from other vendors	2 PROCESSORS
		Should allow dynamic adjustment of the teaming algorithm so that the load is always balanced across a team of physical network adapters	
18	Network	 Should provide an integrated network firewall solution for virtual network with centralized management, suitable for all virtualized applications which should provide below features:- It should be hypervisor-based application-aware firewall solution for virtual datacenters. It should have the ability to control Inbound/outbound connection by enforcing at the virtual NIC level through hypervisor inspection, supporting multi-homed virtual machines. It should provide IP-based stateful firewall and application layer gateway for a broad range of protocols including Oracle, Sun Remote Procedure Call (RPC), Microsoft RPC, LDAP and SMTP. It should provide policy enforcement based on 5 tuple (source IP, destination IP, source port, destination port, protocol). It should have the ability of Inbound and outbound connection control with rules based on IP address (source/destination IP address), Ports (source/destination port), Protocol type (TCP or UDP). It should provide masquerading of virtual datacenter IP addresses to untrusted locations. It should be based on industry-standard syslog format The solution should support enforcing security for virtual machines at the Ethernet layer. Disallow promiscuous mode, sniffing of network traffic, MAC address changes, and forged source MAC transmits. 	

Contd...

	VIRTUALI	SATION SOFTWARE - HYPERVISOR LICENSE QTY 12	2 PROCESSORS
		Shall allow taking point-in-time snapshots of the virtual machines to be able to revert back to an older state if required	
		Shall support live Virtual Machine migration with enhanced CPU compatibility and without the need for shared storage option.	
		Shall dynamically allocate and balance computing capacity across collections of hardware resources aggregated into one unified resource pool with optional control over movement of virtual machines like restricting VMs to run on selected physical hosts.	
19	Other Features for Hypervisor	Virtualization software should provide software FCoE adaptor that can work with a network adaptor that support partial FCoE offload capabilities.	
		Should provide the ability to set constraints that restrict placement of a virtual machine to a subset of hosts in a cluster and to keep virtual machines paired or separated.	
		It should include proactive smart alerts with self- learning performance analytics capabilities	
		Should provide support for a single 62TB file	
		Should provide an option to deploy and manage big data solutions like Hadoop on the virtualization platform	

Contd ...

VIRTUALISATION SOFTWARE - QTY 12 PROCESSORS						
		Should provide prebuilt and configurable operations dashboards to provide realtime insight into infrastructure behavior, upcoming problems, and opportunities for efficiency improvements Should provide capability to automatically analyze monitoring data to be expressed as health, risk and efficiency measures that enable IT to detect potential issues in the environment more easily				
		Should provide capacity analytics which can identify over-provisioned resources so they can be right-sized for most efficient use of virtualized resources.				
		Should provide "What If" scenarios to eliminate the need for spreadsheets, scripts and rules of thumb				
20	Operation Management	Should provide infrastructure and operations analytics to eliminate time-consuming problem resolution processes through automated root cause analysis				
		Should provide flexible capacity reporting capabilities to provide deep visibility into resource consumption trends				
		Should provide self-learning performance analytics and dynamic thresholds which can adapt to the environment to simplify operations management and eliminate false alerts				
		Should provide integrated smart alerts for health, performance and capacity degradation to identify building performance problems before they affect end users				
		The solution should provide advanced capacity analytics to allow administrators to optimize VM density and identify capacity shortfalls before they affect end users				
		Should provide real-time, integrated dashboards of performance and capacity to enable a proactive management approach and help ensure SLAs are met				

Contd ...

VIRTUALISATION SOFTWARE - QTY 12 PROCESSORS						
20	Operations Management	Should provide intelligent operations groups which would provide operational insights into health, risk and efficiency of resources by application, line of business, production workload, configuration types, and other relationship type. The group memberships should be updated to reflect changes in the environment dynamically to display accurate information in real-time, enabling IT to better align with business teams and operations The solution should provide flexible group policies which would let admin to define specific health, risk and capacity thresholds, alert types and notifications, business hours and many other configuration settings at a group level to prioritize operational activities for business critical applications, production workloads or business units				
	contd	Should provide Monitoring of physical hardware resources of ESX hosts. These monitoring capabilities combined with patented analytics should extend operational visibility and proactive management capabilities across infrastructure Should provide automated workflow triggers which would let admins associate workflows created in Orchestrator layer with Operations alerts. For example, these workflows can automatically delete old VM snapshots when available capacity falls below a critical threshold or add resources when workload demands are rising above normal. Automated workflows help reduce Mean time to incident (MTTI) and mean time to resolution (MTTR) Support should be from Original OEM				
21	Licensing	Hypervisor license MUST be based on physical server processor count and not core based or any other parameter.				
22	Warranty	3 years comprehensive On-site support for L1, L2, L3 which should include bug fixing, configuration support, patch upgrades and version upgrades				

24. ANNEXURE – 4

Price Bid Format

The bidders should strictly follow the format given below for submitting the price –bids and should submit the same on their official letter head.

Sr. No.	Description	Unit Rate Without Taxes (INR)	Taxes (INR)	Total Unit Rate (INR)	Quantity	Amount (INR)
		Α	В	C=A+B	Q	D=C x Q
1	CORE INFRASTRUCTURE					
а	Blade Chassis with Support					
b	Blade Servers with Support					
С	SAN Storage with Support					
d	SAN Switch with Support					
е	Autoloader with Support					
f	Network Switches with Support					
g	Virtualisation software for 12 processors with Support					
	Sub Total Core Infrastructure (X)					
2	IMPLEMENTATION					
а	Implementation Charges					
	Sub Total Implementation Charges (Y)					
	GRAND TOTAL (Z=X+Y)					

Grand Total Amount in Words

Rs.: ____

Note: 1. Grand Total is the sum of Price for ALL regions mentioned above

2. The prices quoted are for the Scope of Work as mentioned in Annexure 2

3. The prices are valid for 180 days from the date of bid.

For and on behalf of:

Signature (Authorized Representative and Signatory of the Bidder):

Name of the Person: Designation: Date:

Request for Proposal

25. ANNEXURE – 5

DETAILS FOR E-TENDER PROCEDURE

NOTICE DETAILS

Tender Reference no.	MPCB/EIC/e-Tender <> Date :XX/10/2015
Name of Work / Item	Selection of System Integrator for Data Centre Core Infrastructure Modernisation
Cost of blank tender document & Mode of Payment	Rs. 10,000/- (Rupees Ten Thousand Only) (Non Refundable) to be paid through Online Payment Modes i.e. Net Banking, Debit Card and Credit Card during Tender Document Download Stage.
EMD Amount & Mode of Payment	Rs.3,00,000/- (Rupees Three Lakhs Only) to be paid through Online Payment Modes i.e. Net Banking, Debit Card, Credit Card and NEFT/RTGS during Bid Preparation Stage.
Date ,Time and Place for Training on e-Tendering Process	30th December 2015 11:00 Hrs at MPCB Conference Hall, Kalpataru Point, 4 th Floor, Sion Matunga Scheme Road No.8,Opp. Sion Circle. Sion (East), Mumbai - 400 022
Date ,Time and Place of Pre Bid Meeting	30th December 2015 15:00 Hrs at MPCB Conference Hall,Kalpataru Point, 4 th Floor, Sion Matunga Scheme Road No.8,Opp. Sion Circle. Sion (E), Mumbai-400 022
Venue of online opening of tender	MPCB Conference Hall, Kalpataru Point, 4 th Floor, Sion Matunga Scheme Road No.8,Opp. Sion Circle. Sion (East), Mumbai - 400 022
Address for Communication	Member Secretary MPC Board, Kalpataru Point, 4 th Floor, Sion Matunga Scheme Road No.8,Opp. Sion Circle. Sion (East), Mumbai - 400 022
Contact Telephone & Fax Numbers	Tel.No 022- 240 87 295, 022- 240 10437 Fax - 022- 240 87 295 Email - eic@mpcb.gov.in
e-Tendering Helpline Support:	Telephone:
Monday-Friday: 09:00 AM - 08:00 PM	020 - 3018 7500 Email: support.gom@nextenders.com
Saturday - 09:00 AM - 06:00 PM	

<u>e-TENDER TIME SCHEDULE</u> Please Note: All bid related activities (Process) like Tender Document Download, Bid Preparation, and Bid Submission will be governed by the time schedule given under Key Dates below:

Sr. No.	Activity	Performed	Star	t	Expi	ry
Sr. No.	Activity	by	Date	Time	Date	Time

1 Release of Tender Department 08-12-2015 11.00 10-12-2015 16.00
--

2	Tender Download	Biddore	11-12-2015	11.00	23-12-2015	17.00
3	Bid Preparation	Bidders	11-12-2015	11.00	08-01-2016	17.00

4	Superhash Generation & Bid Lock	Department	11-01-2016	11.01	11-01-2016	13.00
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5 Control Transfer	Bidders	11-01-2016	13.01	12-01-2016	17.00
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6	Envelope 1 Opening	Department	13-01-2016	14.00	13-01-2016	17.00
7	Envelope 2 Opening		25-01-2016	11.00	25-01-2016	13.00

* Dates mentioned here, are scheduled dates for Bid Opening Activities. Any changes in dates of opening of technical and commercial bids shall be notified in 'Press Notice / Corrigendum' section on the e-Tendering sub portal of the department before opening of the same.

INSTRUCTIONS TO BIDDERS FOR e-Tendering

GENERAL INSTRUCTIONS:

The bidders are requested to familiarize themselves with the use of the e-Tendering portal of Government of Maharashtra well in advance

To view- Tender Notice, Detailed Time Schedule, Tender Document for this Tender and subsequently purchase the Tender Document and its supporting documents, kindly visit following e-Tendering website of **Government of Maharashtra**: <u>https://maharashtra.etenders.in</u>

The Contractors participating first time for e-Tenders on GoM e-tendering portal will have to complete the Online Registration Process for the e-Tendering portal. A link for enrollment of new bidders has been provided on <u>https://maharashtra.etenders.in</u>

All bidders interested in participating in the online e-Tendering process are required to procure Class II or Class III Digital e-Token having 2 certificates inside it, one for Signing/Verification purpose and another for Encryption/Decryption purpose. The tender should be prepared & submitted online using individual's Digital e-Token.

An important Training Workshop on e-Tendering procedure will be held on 30-12-2015 at 11:00 Hrs. at 4th floor Conference Hall , MPCB, Sion.

e-Tendering Tool Kit for Bidders (detailed Help documents, designed for bidders) has been provided on e-Tendering website in order to guide them through different stages involved during e-Tendering such as online procedure for Tender Document Purchase, Bid Preparation, Bid Submission.

Bidders will have to pay cost of Tender Document through online modes of payment such as **Net Banking, Debit Card and Credit Card** during **Tender Document Download stage**. This payment will not be accepted by the department through any offline modes such as Cash, Cheque or Demand Draft.

Similarly, Bidders will have to pay Earnest Money Deposit through online modes of payment such as **Net Banking, Debit Card, Credit Card and NEFT/RTGS** during **Bid Preparation stage**. This payment will not be accepted by the department through any offline modes such as Cash, Cheque or Demand Draft.

The interested contractors / bidders will have to make online payment (using credit card/debit card/net banking) of Rs. **1054/-** (inclusive of all taxes) per bid per tender to online service provider of e-Tendering system (Sify NexTenders) at the time of entering **Online Bid Submission** stage of the tender schedule.

If any assistance is required regarding e-Tendering (registration / upload / download) please contact GoM e-Tendering Help Desk on number: **020 – 3018 7500 (Pune Helpline), Email:** <u>support.gom@nextenders.com</u>

For a bidder, online bidding process consists of following 3 stages:

- 1. Online Tender Document Purchase and Download
- 2. Online Bid Preparation
- 3. Online Bid Submission

All of 3 stages are mandatory in order for bidders to successfully complete Online Bidding Process.

TENDER DOCUMENT PURCHASE AND DOWNLOAD:

The tender document is uploaded / released on Government of Maharashtra, (GOM) etendering website <u>https://maharashtra.etenders.in</u>. Tender document and supporting documents may be purchased and downloaded from following link of Maharashtra Pollution Control Board on e-Tendering website of Government of Maharashtra, <u>https://allgom.maharashtra.etenders.in</u> by making payment through **Online Payment Modes i.e. Net Banking, Debit Card and Credit Card**.

If for any reason a bidder fails to make this payment through online modes, system won't allow the bidder proceed further for next stage resulting in his/her elimination from Online Bidding Process.

This payment will not be accepted by the department through any offline modes such as Cash, Cheque or Demand Draft.

Subsequently, bid has to be prepared and submitted online ONLY as per the schedule.

The Tender form will be available online only. Tender forms will not be sold / issued manually from M.P.C.Board office

The bidders are required to download the tender document within the pre-scribed date & time mentioned in online tender schedule. After expiry of the date and time for tender document download, Department / Corporation will not be responsible for any such failure on account of bidders for not downloading the document within the schedule even though they have paid the cost of the tender to the Department / Corporation. In such case the cost of the tender paid by the bidders will not be refunded.

PREPARATION & SUBMISSION OF BIDS

Both the Bids (Technical as well as Commercial) shall have to be prepared and subsequently submitted online only. Bids not submitted online will not be entertained.

Online Bid Preparation

EARNEST MONEY DEPOSIT (EMD)

Bidders are required to pay Earnest Money Deposit (if applicable) through Online Payment modes i.e. **Net Banking, Debit Card, Credit Card and NEFT/RTGS** during Bid Preparation Stage.

This payment will not be accepted by the department through any offline modes such as Cash, Cheque or Demand Draft.

If for any reason a bidder fails to make this payment through online modes, system won't allow the bidder to complete Bid Preparation stage resulting in his/her elimination from Online Bidding Process.

In case EMD is mandatory to all the bidders for a tender, offers made without EMD shall be rejected. No exemption will be given for EMD.

In Bid Preparation stage, bidders get access to Online Technical and Commercial Envelopes where they require uploading documents related to technical eligibility criteria and quote commercial offer for the work / item in respective online envelopes.

TECHNICAL BID

Following documents should be uploaded in Online Technical Envelope (T1) in PDF format, if required can be zipped as well and then uploaded during **Online Bid Preparation stage**.

The list of documents for Technical Envelope is as follows:

Sr. No.	List of Documents	Compulsory / Additional
1	Covering Letter As per Format in EXHIBIT 1	Compulsory
2	Attested copy of Power of Attorney	Compulsory
3	Proof of Purchase of RFP	Compulsory
4	EMD as per Section 6.6.2	Compulsory
5	Certificate of incorporation / Registration and Service Tax registration certificate	Compulsory
6	CA's Certification regarding net worth of the bidder as on 31 st March 2015	Compulsory
7	Documentary Proofs as testimony for Evaluation of Technical bids as per criteria listed in Section 7.4.1	Compulsory
8	Technical Proposal as mentioned in section 7.2 section2	Compulsory
9	Covering Letter As per Format in EXHIBIT 2	Compulsory
10	Manufacturer's Authorisation Form as per EXHIBIT 3	Compulsory
11	Duly filled, signed and stamped Technical Compliance form as per Annexure - 3	Compulsory

COMMERCIAL BID

All commercial offers must be prepared online (An online form will be provided for this purpose in Online Commercial Envelope (C1), during **Online Bid Preparation** stage).

Any bidder should not quote his offer any where directly or indirectly in Technical Envelope (T1), failing which the Commercial Envelope (C1) shall not be opened and his tender shall stand rejected.

Note: During Online Bid Preparation stage, bidders are allowed to make any changes or modifications in the bid data uploaded by them in Technical (T1) as well as Commercial (C1) envelope.

Towards the end of Bid Preparation, once verification of EMD payment is successful, bidder completes the Bid Preparation stage by generating the Hash Values for T1 and C1. Post this, system won't allow him/her to make any further changes or modifications in the bid data.

Online Bid Submission

In this stage, bidders who have successfully completed their Bid Preparation stage are required to transfer the data, already uploaded by them during Bid Preparation stage, from their custody to department's custody.

Note: During this stage, bidders won't have any capability to make any kind of changes or editing into technical as well as commercial data.

INSTRUCTION TO BIDDERS FOR ONLINE BID PREPARATION & SUBMISSION

Bidders are required to pay Earnest Money Deposit (if applicable to them) through Online Payment modes i.e. **Net Banking, Debit Card, Credit Card and NEFT/RTGS** during Bid Preparation Stage.

If for any reason a bidder fails to make this payment through online modes, system won't allow the bidder to complete Bid Preparation stage resulting in his/her elimination from Online Bidding Process.

Hence, it is strongly recommended to bidders to initiate this payment well in advance prior to expiry of Bid Preparation stage in order to avoid elimination from Online Bidding Process on grounds of failure to make this payment.

During the activity of **Bid Preparation**, bidders are required to upload all the documents of the technical bid by scanning the documents and uploading those in the PDF format. This apart, bidders will have to quote commercial offer for the work / item, for which bids are invited, in an online form made available to them in Commercial Envelope. This activity of **Bid Preparation** should be completed within the pre-scribed schedule given for bid preparation.

After **Bid Preparation**, the bidders are required to complete **Bid Submission** activity within pre-scribed schedule without which the tender will not be submitted.

Interested contractors / bidders will have to make online payment (using credit card/debit card/net banking/Cash Card) of Rs. **1054**/- (inclusive of all taxes) per bid per tender to online service provider of e-Tendering system (Sify NexTenders) at the time of commencing **Online Bid Submission** stage of the tender schedule.

Non-payment of processing fees will result in non submission of the tender and Department will not be responsible if the tenderer is not able to submit their offer due to non-payment of processing fees to the e-tendering agency.

Detailed list of different modes of online payment to e-tendering service provider (E-Payment Options) has been provided under <u>E-Tendering Toolkit for Bidders</u> section of <u>https://maharashtra.etenders.in</u>.

The date and time for online preparation followed by submission of envelopes shall strictly apply in all cases. The tenderers should ensure that their tender is prepared online before the expiry of the scheduled date and time and then submitted online before the expiry of the scheduled date and time. No delay on account of any cause will be entertained. Offers not submitted online will not be entertained.

If for any reason, any interested bidder fails to complete any of online stages during the complete tender cycle, department shall not be responsible for that and any grievance regarding that shall not be entertained.

Any amendment to the tender will be placed on sub portal of the Department, who have invited the bids, on e-tendering portal of the Govt. of Maharashtra. The tenderer will not be communicated separately regarding the amendment.

OPENING OF BIDS:

The bids that are submitted online successfully shall be opened online as per date and time given in detailed tender schedule (if possible), through e-Tendering procedure only in the presence of bidders (if possible).

Bids shall be opened either in the presence of bidders or it's duly authorised representatives. The bidder representatives who are present shall sign a register evidencing their attendance. Only one representative per applicant shall be permitted to be present at the time of opening the tender.

TECHNICAL ENVELOPE (T1):

First of all, Technical Envelope of the tenderer will be opened online through e-Tendering procedure to verify its contents as per requirements.

At the time of opening of technical bid the tenderer should bring all the original documents that have been uploaded in the Online Technical Envelope (T1) so that same can be verified at the time of opening of technical bid.

If the tenderer fails to produce the original documents at the time of opening of technical bid then the decision of the committee taken on the basis of document uploaded will be final and binding on the tenderer.

If the various documents contained in this envelope do not meet the requirements, a note will be recorded accordingly by the tender opening authority and the said tenderer's Commercial Envelope will not be considered for further action but the same will be recorded.

Decision of the tender opening authority shall be final in this regard.

The right to accept or reject any or all tenders in part or whole without assigning any reason thereof is reserved with Tender Opening Authority and his decision(s) on the matter will be final and binding to all.

The commercial bids shall not be opened till the completion of evaluation of technical bids.

The commercial Bids of only technically qualified Bidders as mentioned above will be opened.

COMMERCIAL ENVELOPE (C1):

This envelope shall be opened online as per the date and time given in detailed tender schedule (if possible), through e-Tendering procedure only,

PRICE SCHEDULE

Note: Commercial Offer has to be entered online only. An <u>Online Form</u>, similar to the Commercial format given below, will be available to the bidders in Commercial Envelope (C1) during Online Bid Preparation stage where bidders would quote their offer.

Final List of Documents to be uploaded Online:

The following documents should be uploaded by the bidders in the form of PDF Files in the same order as mentioned below, on the e-Tendering website during **Online Bid Preparation** stage.

Sr. No.	List of Documents	Compulsory / Additional
	FOR TECHNICAL BID	
1	Covering Letter As per Format in EXHIBIT 1	Compulsory
2	Attested copy of Power of Attorney	Compulsory
3	Proof of Purchase of RFP	Compulsory
4	EMD as per Section 6.6.2	Compulsory
5	Certificate of incorporation / Registration and Service Tax registration certificate	Compulsory
6	CA's Certification regarding net worth of the bidder as on 31 st March 2015	Compulsory
7	Documentary Proofs as testimony for Evaluation of Technical bids as per criteria listed in Section 7.4.1	Compulsory
8	Technical Proposal as mentioned in section 7.2 section2	Compulsory
9	Covering Letter As per Format in EXHIBIT 2	Compulsory
10	Manufacturer's Authorisation Form as per EXHIBIT 3	Compulsory
11	Duly filled, signed and stamped Technical Compliance form as per Annexure - 3	Compulsory
	FOR COMMERCIAL / PRICE BID	
1	Covering Letter As per Format in EXHIBIT 2	Compulsory
2	Price Bid in the format given in Annexure 4, duly signed and sealed	Compulsory
3		

Note: During **Online Bid Preparation**, apart from the above mentioned documents, if any need arises to upload additional documents in Technical Envelope, an option of **'Upload Additional Documents**' has been provided in the e-Tendering software which will be available to bidders during **Online Bid Preparation** stage