



E-Tender for

Data Center Design and Construction

for

Export-Import Bank of India

E-Tender Reference No: EXIM/RFP/2019-20/080

Head Office: Center One Building, 21st Floor, World Trade Centre Complex, Cuffe Parade,

Mumbai – 400 005

QUOTATION BID NOTICE

1. Export-Import Bank of India (EXIM Bank), a corporation established under the Act Export-Import Bank of India, 1981 and having its registered office at 21st Floor, World Trade Centre Complex, Cuffe Parade, Mumbai 400 005 invites bids from eligible bidders for “Data Center Design and Construction” for Export-Import Bank of India”.
2. The mode of tendering is through e-Tendering. E-Tendering is the process by which the physical tendering activity is carried out using internet and associated technologies in a faster and secure environment.
3. Vendor registration can be done online by opening Website:
<https://eximbankindiatenders.procuretiger.com> Click on “New Bidder Registration” link, create User Id and Password and attach your Digital certificate.
4. Tender document will be allowed for download from above web site after successful vendor registration (hard copies of the tender document will not be provided) and submission of tender document cost.

5. CONTACT INFORMATION FOR E-TENDER PROCESS

e-Procurement Technologies Limited

A- 801 – Wall Street - II,

Opposite Orient Club,

Nr. Gujarat College, Ellis Bridge,

Ahmedabad – 380 006.

Gujarat State, India

Phone: +91 (79) 68136820/29/31/35/40/43/52/53/57/59/63

Fax: +91 (79) 40230847

Email Ids: support@auctiontiger.net

6. EXIM Bank reserves the right to accept or reject in part or full any or all the offers without assigning any reasons there for.

GENERAL TENDER DETAILS

Tender Document for	Data Center Design and Construction for Exim Bank
Tender Reference No.	EXIM/RFP/2019-20/080
Tender Document Cost.	₹ 10,000/- (Non-refundable) (Demand Draft (DD) in favor of “ Export-Import Bank of India ” payable at Mumbai.
EMD Amount	₹ 5,00,000/-
Last date for acceptance of E-Tender Document Cost, IP Agreement, EMD Amount	March 28,2020 5:00 PM
Place of Submission of DD and IP Agreement original document.	Export Import Bank of India, Center One Building, 21 st Floor, World Trade Centre Complex, Cuffe Parade, Mumbai 400 005
Date of Online Notice	March 06, 2020 5:00 PM
Date of Pre bid meeting	March 13, 2020 11:00 AM – 11:59 AM
Document Downloading Start Date	March 06, 2020 5:00 PM
Document Downloading End Date	March 26,2020 5:00 PM
Last Date and Time For Submission	March 28,2020 5:00 PM
Opening of Tender	March 30,2020 11:00 AM
Address for communication	As above Ph. 022-22172600, Ext: - 2410/2446 E-Mail: dharmendra@eximbankindia.in , Mahesh.b@eximbankindia.in
Place of Receipt of E-Tender	https://eximbankindiatenders.procuretiger.com

Note: Commercial bids will be opened online only. E-Tendering is the simulation of the manual tendering process on the internet. I.e. the eligible Bidders / Service Providers can log on to the internet site specified using a unique username and password and place their Technical & Commercial bids.

The eligible Bidders will be trained by M/s e-Procurement Technologies Ltd. (Abc Procure) personnel on the methodology of submitting the bids online using a special digital signature / electronic key / password at the date and time specified. The bids placed by the Bidders are confidential and will be opened by the authorized EXIM Bank officials. No other person can gain access to the information regarding the bids, which is confidential and encrypted in nature.

Minimum requirement for e-tender participation:

1. Computer / Laptop with internet connection.
2. Operating system – Windows 7/ Windows 10.
3. Digital certificate - Class II or III, signing + Encryption, and **it should be organizational certificate only.**
4. Vendor registration can be done online by opening Website:
<https://eximbankindiatenders.procuretiger.com> Click on “New Bidder Registration” link, create User Id and Password and attach your Digital certificate.

For any clarification on technical support kindly contact –

E-Procurement Technologies
Limited 801 – Wall Street – II
Opposite Orient Club near Gujarat College,
Ellis Bridge, Ahmedabad – 380 006
Gujarat, India
Phone: +91 (79) 68136820/29/31/35/40/43/52/53/57/59/63
Fax: +91 (79) 40230847

For any clarification on Bill of Material / lay out/ DC Design / UPS System/ Network Kindly contact –

CORE DESIGNS (Consultant firm for DC Design and Construction)

301/ 302, Riddhi Siddhi Bldg.,
opposite Sahkar Cinema, Tilak Nagar,
Chembur (W), Mumbai - 400089.
Email: girish.patil@coregroupindia.co.in
Cell. No. : +91 98203 54870 / 099209 95522 / 082912 95762

Export Import Bank Of India

Centre One Building, Floor 21, World
Trade Centre Complex, Cuffe Parade,
Mumbai 400 005
Email : mahesh.b@eximbankindia.in
Cell Number : 08879996541

Mandatory information required for pre-qualification of the Bidder

I/We confirm that to the best of our knowledge this information is authentic and accept that any deliberate concealment will amount to disqualification at any stage.

Sr. No.	Particulars	Details
1. Name of the Firm		
2. Name of the Proprietor, Partners/Directors		
A (Mobile No.)		
B (Mobile No.)		
3. Office Telephone Nos.		
a.		
b.		
c.		
4. Head Office Address		
5. Email Address		
a.		
b.		
6. Year of Establishment		
7. Registration No. and Date of Registration		
8. Status of the firm (Proprietor/Partnership/Co. etc.)		
9. Name of Bankers	a.	
	b.	
10. PAN Card No.		
11. GST No.		

Seal and Signature of the document to be uploaded on the E-tender portal.

Date:

Place:

Note:

INFORMATION FOR BIDDERS

1. Bids shall be submitted online only at website: <https://eximbankindiatenders.procuretiger.com/EPROC/>
2. The bidders can enroll themselves on the website: <https://eximbankindiatenders.procuretiger.com/>. Possession of a Valid Class II/III Digital Signature Certificate (DSC) in the form of smart card/e-token in the Company's name is a prerequisite for registration and participating in the bid submission activities through this web site.
3. The tenderers should have Digital Signature Certificate (DSC) for filling up the Bids. The person signing the tender documents should be authorized for submitting the on line e-tender.
4. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid.
5. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
6. Please Make sure all format asked as per Sr No 4 and 5 of tender document are properly uploaded online Website for E-Procurement <https://eximbankindiatenders.procuretiger.com/>
7. This Invitation for Bids is open to all Original Manufacturers/ their Authorized Dealers/ vendors / suppliers to quote on their behalf for this tender as per Manufacturer's Authorization Form and Indian Agents of Foreign Principals, if any who possess the qualifying requirements as specified in the Tender. Any person signing a Tender shall submit documentary evidence that his signature on the Tender, submitted by him, is legally binding upon himself, his firm. If it is detected that the person so signing the Tender has no authority to do so, the General Manager, Exim Bank may, without prejudice to other civil and criminal remedies, not consider the Tender and hold the signatory liable for all costs and damages. Bidders should not be associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by the Purchaser to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods to be purchased under this Invitation of Bids. The bidder or his agent must have an office in India. That the Bidder will assume total responsibility for the fault-free operation of equipment, application software, if any, and maintenance during the warranty period and provide necessary maintenance services after end of warranty period if required. Bidders who meet the criteria given above are subject to be disqualified, if they have made untrue or false representation in the forms, statements and attachments submitted in proof of the qualification requirements or have a record of poor performance, not properly completing the contract, inordinate delays in completion or financial failure, etc. The Bidder should be a manufacturer or their dealer specifically authorized by the manufacturer to quote on their behalf of this tender as per manufacturer authorization form and Indian agents of foreign principals, if any who must have designed, manufactured, tested and supplied the equipment(s) similar to the type specified in the "Technical Specification". Such equipment must be of the most recent series/models incorporating the latest improvements in design. The models should be in successful

operation for at least one year as on date of Bid Opening in India and is engaged in R&D activities.

CONDITIONS FOR MICRO, SMALL AND MEDIUM ENTERPRISES (MSMEs)

1. As per Public Procurement policy (PPP) for Micro & Small Enterprises (MSEs) Order, 2012 issued vide Gazette Notification dated 23.03.2012 by Ministry of Micro, Small and Medium Enterprises of Govt. of India, MSEs must be registered with any of the following in order to avail the benefits / preference available vide Public Procurement Policy MSEs Order, 2012.
 - a) District Industries Centers (DIC)
 - b) Khadi and Village Industries Commission (KVIC)
 - c) Khadi and Village Industries Board
 - d) Coir Board
 - e) National Small Industries Corporation (NSIC)
 - f) Directorate of Handicraft and Handloom
 - g) Any other body specified by Ministry of MSME (MoMSME)
 - h) Udyog Aadhaar Acknowledgment/Udyog Aadhaar Memorandum issued by MoMSME.
2. MSEs participating in the tender must submit valid & authorized copy of certificate of registration with any one of the above agencies. In case of bidders submitting DIC registration certificate shall attach original notarized copy of the DIC certificate. The MSE's Bidder to note and ensure that nature of services and goods/items manufactured mentioned in MSE's certificate matches with the nature of the services and goods /items to be supplied as per Tender.
3. The registration certificate issued from any one of the above agencies must be valid as on Bid closing date of the tender. Bidder shall ensure validity of registration certificate in case bid closing date is extended.
4. The MSMEs who have applied for registration or renewal of registration with any of the above agencies/bodies, but have not obtained the valid certificate as on close date of the tender, are not eligible for exemption/preference.
5. The MSMEs registered with above mentioned agencies /bodies are exempted from payment of Earnest Money Deposit (EMD) & tender fees.
6. **Relaxation of Norms for Micro & Small Enterprises (MSMEs):**
 - a. Pre-qualification criteria with respect to Prior Turnover and Prior experience may be relaxed for Micro & Small Enterprises as per GOI guidelines subject to meeting of quality and technical specifications.

- b. However, there may be circumstances like procurement of items/services related to public safety, health, critical security operations and equipment, etc., wherein EXIM Bank reserves the right to not consider relaxation of Prior Turnover and Prior Experience for Micro and Small Enterprises as per GOI guidelines.

GENERAL CONDITIONS OF RFP

The Bidder is required to give confirmation of their acceptance of the General Conditions of the Request for Proposal mentioned below which will automatically be considered as part of the Contract concluded with the successful Bidder (i.e. Seller in the Contract) as selected by the Buyer. Failure to do so may result in rejection of the Bid submitted by the Bidder.

1. **Law:** The Contract shall be considered and made in accordance with the laws of the Republic of India. The contract shall be governed by and interpreted in accordance with the laws of the Republic of India.
2. **Effective Date of the Contract:** The contract shall come into effect on the date of signatures of both the parties on the contract (Effective Date) and shall remain valid until the completion of the obligations of the parties under the contract. The deliveries and supplies and performance of the services shall commence from the effective date of the contract.
3. **Standard Arbitration Clause:** All disputes or differences arising out of or in connection with the present contract including the one connected with the validity of the present contract or any part thereof, should be settled by bilateral discussions. Any dispute, disagreement or question arising out of or relating to this contract or relating to construction or performance (except as to any matter the decision or determination whereof is provided for by these conditions), which cannot be settled amicably, shall within sixty (60) days or such longer period as may be mutually agreed upon, from the date on which either party informs the other in writing by a notice that such dispute, disagreement or question exists, will be referred to a sole Arbitrator. Within sixty (60) days of the receipt of the said notice, an arbitrator shall be nominated in writing by the authority agreed upon by the parties. The sole Arbitrator shall have its seat in Mumbai or such other place in India as may be mutually agreed to between the parties. The arbitration proceedings shall be conducted under the Indian Arbitration and Conciliation Act, 1996 and the award of such Arbitration Tribunal shall be enforceable in Indian Courts only. Each party shall bear its own cost of preparing and presenting its case. The cost of arbitration including the fees and expenses shall be shared equally by the parties, unless otherwise awarded by the sole arbitrator. The parties shall continue to perform their respective obligations under this contract during the pendency of the arbitration proceedings except in so far as such obligations are the subject matter of the said arbitration proceedings.

(Note - In the event of the parties deciding to refer the dispute/s for adjudication to an Arbitral Tribunal then one arbitrator each will be appointed by each party and the case will

be referred to the Indian Council of Arbitration (ICADR) for nomination of the third arbitrator. The fees of the arbitrator appointed by the parties shall be borne by each party and the fees of the third arbitrator, if appointed, shall be equally shared by the buyer and seller).

4. **Penalty for use of Undue influence:** The Seller undertakes that he has not given, offered or promised to give, directly or indirectly, any gift, consideration, reward, commission, fees, brokerage or inducement to any person in service of the Buyer or otherwise in procuring the Contracts or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of the present Contract or any other Contract with the Export-Import Bank of India. Giving or offering of any gift, bribe or inducement or any attempt at any such act on behalf of the Seller towards any officer/employee of the Buyer or to any other person in a position to influence any officer/employee of the Buyer for showing any favour in relation to this or any other contract, shall render the Seller to such liability/penalty as the Buyer may deem proper, including but not limited to termination of the contract, imposition of penal damages, forfeiture of the Bank Guarantee and refund of the amounts paid by the Buyer.
5. **Non-disclosure of Contract documents:** Except with the written consent of the Buyer/Seller, other party shall not disclose the contract or any provision, specification, plan, design, pattern, sample or information thereof to any third party.
6. **Liquidated Damages:** In the event of the Seller's failure to submit the Bonds, Guarantees and Documents, supply the stores/goods and conduct trials, installation of equipment, training, etc. as specified in this contract, the Buyer may, at his discretion, withhold any payment until the completion of the contract. The BUYER may also deduct from the SELLER as agreed, liquidated damages to the sum of 0.5% of the contract price of the delayed/undelivered stores/services mentioned above for every week of delay or part of a week, subject to the maximum value of the Liquidated Damages being not higher than 10% of the value of delayed stores/services.
7. **Termination of Contract:** The Buyer shall have the right to terminate this Contract in part or in full in any of the following cases:
 - (a) The Seller is declared bankrupt or becomes insolvent.
 - (b) The Buyer has noticed that the Seller has utilised the services of any Indian/Foreign agent in getting this contract and paid any commission to such individual/company etc.
 - (c) With mutual agreement
 - (d) As per decision of the Arbitration Tribunal.
8. **Notices:** Any notice required or permitted by the contract shall be written in the English language and may be delivered personally or may be sent by FAX or registered pre-paid mail/airmail or email, addressed to the last known address of the party to whom it is sent.

9. **Patents and other Industrial Property Rights:** The prices stated in the present Contract shall be deemed to include all amounts payable for the use of patents, copyrights, registered charges, trademarks and payments for any other industrial property rights. The Seller shall indemnify the Buyer against all claims from a third party at any time on account of the infringement of any or all the rights mentioned in the previous paragraphs, whether such claims arise in respect of manufacture or use. The Seller shall be responsible for the completion of the supplies including spares, tools, technical literature and training aggregates irrespective of the fact of infringement of the supplies, irrespective of the fact of infringement of any or all the rights mentioned above.

10. **Amendments:** No provision of present Contract shall be changed or modified in any way (including this provision) either in whole or in part except by an instrument in writing made after the date of this Contract and signed on behalf of both the parties and which expressly states to amend the present Contract.

11. Evaluation and Comparison of Bids:

The bidder meeting the General Eligibility Criteria will be considered for technical evaluation. The Bidder needs to comply with all the eligibility criteria. Non-compliance to any of these criteria would result in outright rejection of the Bidder's proposal. The Bidder is expected to provide proof for each of the points for eligibility evaluation.

The decision of the Bank would be final and binding on all the Bidders to this document. The Bank may accept or reject an offer without assigning any reason what so ever. At the sole discretion and determination of the Bank, the Bank may add any other relevant criteria for evaluating the proposals received in response to this RFP. The evaluation will be a two stage process. The stages are:

- a) General Eligibility evaluation
- c) Commercial evaluation

12. Notices to local bodies:

The Service Provider shall comply with and give all notices required under any law, rule, regulations or bye laws of parliament, state legislature or local authority relating to works.

13. No Bidder shall contact the Bank on any matter relating to its Bid, from the time of the Bid opening to the time the Contract is awarded to successful bidder(s).

14. Any effort by a Bidder to influence Bank's Bid evaluation, Bid comparison or contract award decisions may result in the rejection of the Bid.

15. I / We hereby declare that I / We have read and understood the above instructions for the guidance of the Tenderers. Seal and Signature of the Bidder/s not required since the document is Digitally Signed.

SPECIAL CONDITIONS OF RFP

1. **Advance Payments:** No advance payment(s) would be made OR Advance payments may be made upto 30% against appropriate Bank guarantee or any authorised guarantee, as acceptable to the Buyer. The specimen of BG for Advance Payments is given in Appendix.
2. **OEM Certificate:** In case the Bidder is not the OEM, the agreement certificate with the OEM for sourcing the spares shall be mandatory. However, where OEMs do not exist, minor aggregates and spares can be sourced from authorized vendors subject to quality certification.
3. **Annual Maintenance Contract (AMC) Clause:** The following AMC clause will form part of the contract placed on successful Bidder -
 - a. The Seller would provide comprehensive AMC for a period of 2 years. The AMC services should cover the repair and maintenance of all the equipment and systems purchased under the present Contract. The Buyer Furnished Equipment which is not covered under the purview of the AMC should be separately listed by the Seller. The AMC services would be provided in two distinct ways:
 - i. **Preventive Maintenance Service:** The Seller will provide a minimum of four Preventive Maintenance Service visits during a year to carry out functional check-ups and minor adjustments/ tuning as may be required.
 - ii. **Breakdown maintenance Service:** In case of any breakdown of the equipment/system, on receiving a call from the Buyer, the Seller is to provide maintenance service to make the equipment/system serviceable.
 - b. Response time: The response time of the Seller should not exceed 48 hours from the time the breakdown intimation is provided by the Buyer.
 - c. Maximum repair turnaround time for equipment/system would be 7 days. However, the spares should be maintained in a serviceable condition to avoid complete breakdown of the equipment/system.
 - d. Technical Documentation: All necessary changes in the documentation (Technical and Operators manual) for changes carried out on hardware and software of the equipment will be provided.
 - e. During the AMC period, the Seller shall carry out all necessary servicing/repairs to the equipment/system under AMC at the current location of the equipment/system. Prior permission of the Buyer would be required in case certain components/sub systems are to be shifted out of location. On such occasions, before taking over the goods or components, the Seller will give suitable bank guarantee to the Buyer to cover the estimated current value of item being taken.
 - f. The Buyer reserves its right to terminate the maintenance contract at any time without assigning any reason after giving a notice of 2 months. The Seller will not be entitled to claim any compensation against such termination. However, while terminating the contract,

if any payment is due to the Seller for maintenance services already performed in terms of the contract, the same would be paid to it as per the contract terms.

4. Force Majeure clause:

- a. Neither party shall bear responsibility for the complete or partial non-performance of any of its obligations (except for failure to pay any sum which has become due on account of receipt of goods under the provisions of the present contract), if the non-performance results from such Force Majeure circumstances as Flood, Fire, Earth Quake and other acts of God as well as War, Military operation, blockade, Acts or Actions of State Authorities or any other circumstances beyond the parties control that have arisen after the conclusion of the present contract.
- b. In such circumstances the time stipulated for the performance of an obligation under the present contract is extended correspondingly for the period of time of action of these circumstances and their consequences.
- c. The party for which it becomes impossible to meet obligations under this contract due to Force Majeure conditions, is to notify in written form the other party of the beginning and cessation of the above circumstances immediately, but in any case not later than 10 (Ten) days from the moment of their beginning.
- d. Certificate of a Chamber of Commerce (Commerce and Industry) or other competent authority or organization of the respective country shall be a sufficient proof of commencement and cessation of the above circumstances.
- e. If the impossibility of complete or partial performance of an obligation lasts for more than 6 (six) months, either party hereto reserves the right to terminate the contract totally or partially upon giving prior written notice of 30 (thirty) days to the other party of the intention to terminate without any liability other than reimbursement on the terms provided in the agreement for the goods received.

Introduction

The Export-Import Bank of India (EXIM Bank) is the premier export finance institution of the country that seeks to build value by integrating foreign trade and investment with the economic rise of India. The Bank has guided by expertise at the Board level, by senior policy makers, expert bankers, leading players in industry and international trade as well as professionals in exports, imports or financing. With offices spread across India and in select locations of the world, the bank aspires to boost the businesses of industries and SMEs.

Background and Purpose of the Project

M/s EXIM BANK would like to install and deploy a Modular infrastructure which shall be able to host critical IT technology hardware to run the application. It should be designed in a way that it offers scalability over a period. The design should consider redundancy, scalability and maintainability. The Banks current IT Network Backbone is mostly configured using CISCO Network Devices.

The Bank is inviting all qualified bidders to participate in this e-tender as per eligibility criteria and scope of work mentioned.

Exim Bank Office under this Project:

Sr.No	Location	Office Address
1	Exim Bank Head Office – Mumbai	Export-Import Bank of India, 21st Floor, Center One, World Trade Centre (WTC) Complex, Cuffe Parade, Mumbai 400 005

Scope of Work

PART A

General Requirement (Smart Rack)

M/s EXIM BANK wishes to deploy an Integrated Data Center Infrastructure/ Intelligent Racks which should deliver the following features and benefits.

These specifications describe requirements for a fully integrated and intelligent Data center. The system will be designed to provide precision cooling, Uninterruptible Power System (UPS), Remote Monitoring solution with Biometric Access control for Security, RODENT System, VESDA System and Novec 1230 Fire Suppression system for critical IT components inside the rack.

Sr.No	Description of Requirements	Mandatory / Optional	Compliance (Yes / No) Yes for Mandatory	Remark
1	Scope of Work			
2	Requirements			
2.1	Integrated Data Center Infrastructure Solution (here after referred as 'Smart DC Solution') with Pre-fabricated Cold and Hot aisle containment of 10 racks should cater IT load of maximum 60kVA	Mandatory		

2.2	The Intelligent Integrated Infrastructure essentially includes internal redundant or backup power supplies, environmental controls (e.g., precision air conditioning, fire suppression, smoke detection, water leak detection, humidity sensor, intelligent monitoring system, security devices, etc.) Air-conditioning system is to have 100% reliability on 24x7 basis with adequate standby for system redundancy. (Failure of any single unit; still to meet the total cooling requirement).The ambient temperature considered for the calculation of total tonnage requirement should be 45 Degrees	Mandatory		
2.3	The detail specifications of the DC Solution, standalone system shall be in adherence to standard Data Centre guidelines thus shall be composed of multiple active power and cooling distribution paths, but only one path active. Shall have redundant components.	Mandatory		
3	Solution shall have following components: -			
3.1	In-Row closed loop Air-Conditioning	Mandatory		
3.1.1	Data center server and network racks should be equipped with cooling units to provide closed loop precision cooling system which should be able to cool the equipment's uniformly right from 1st U to 42nd U of Rack through Row/Rack Based Cooling	Mandatory		

3.1.2	<p>Precision Air Cooling solution should be of 20kW capacity with standby (N+1 Redundancy)</p> <p>Precision Air Conditioner should have following Features:</p> <ol style="list-style-type: none"> 1. Cooling System should be DX (Inverter type brushless compressor/Digital Scroll) type. 2. Inbuilt Heater and Humidifier to cater IT load up to 20kW 3. Outdoor Unit & Microprocessor based Controller 	Mandatory		
3.2	<p>True online, Fully Digital Dual DSP Controlled Transformer Based UPS System</p>	Mandatory		
3.2.1	<p>UPS should be of 2 x 60kVA in N+N topology with PF up to 0.9 and efficiency at least 90% and above & SMF Battery with interlinks and connection to be provided to deliver combined 30Mins of backup at full load. Other features of UPS system are as follows:</p> <ol style="list-style-type: none"> 1. True On-line UPS with Widest input range at full load (305V-477V) or better. 2. On-Line Double Conversion IGBT based PWM Inverter 3. Built in isolation with static bypass 4. Facility for remote monitoring 5. N+N redundancy should be provided. 6. Wide input frequency range of 45Hz to 65Hz 7. Input power factor: 0.9 8. Overload capability: 110% full load for 60 minutes 125% full load for 10 minutes 150% full load for 1 minutes 	Mandatory		
3.3	Power Distribution			
3.3.1	<p>Basic Rack PDU (Vertical 0U, 1 Phase)-with 20 Indian sockets (5/15Amp)-02Nos. for each Rack with 2.5-meter power chord (each rack having two PDU's)</p>	Mandatory		
3.4	Main Electrical Panel and Cabling	Mandatory		

3.4.1	DB panel should be mounted on to utility rack/room wall with all internal cabling integrated into the same. Essential MCB/MCCB should be provided with electrical system. All the PDUs inside all racks should be connected by the UPS. DB panel mounted on Utility rack shall be covered with Novec 1230 Gas based fire suppression system	Mandatory		
3.4.2	Any extra electrical points and data points required in the server room shall have to be provided by the vendor at his own cost	Mandatory		
3.5	Fire Detection and Suppression	Mandatory		
3.5.1	Fire detection and suppression system should be mounted in panel adjacent to Smart Racks to avoid consumption of any usable U space an In-rack built-in feature of solution. It should have Fire alarm and fire suppression unit and the fire suppression agent should be NOVEC 1230 Gas as per NFPA guidelines.	Optional (System can be mounted anywhere in the room)		
3.5.2	VESDA system should be mounted in panel adjacent to Smart Racks to avoid consumption of any usable U space an In-rack built-in feature of solution. It should detect smoke and should act as pre-alert system of Fire as per NFPA guidelines.	Optional (System can be mounted anywhere in the room)		
3.6	Environmental Controls	Mandatory		
3.6.1	Smart Racks should include basic environmental controls: 12 Nos. Temperature/ Humidity Sensors	Mandatory		
3.7	Racks and U Space			
3.7.1	10 No.of 42 U racks of dimension 800 mm x 1000mm	Mandatory		
3.7.2	Solution should have Min 410U (total) space available for IT and network equipment. (UPS & Battery External)	Mandatory		
3.7.3	Blanking Panel: 70% each for all the supplied Racks.	Mandatory		
3.7.4	Total Depth of the enclosure including hot and cold aisle should be more than 1200mm	Mandatory		

3.7.5	The rack must have caging partition between two racks at both cold and hot aisle containment to avoid intrusion from one rack to adjacent rack	Optional		
3.8	Monitoring			
3.8.1	UPS, In-row Cooling unit, Temperature, Humidity sensors monitoring facility for Smart racks, Door sensors, Water Leak sensor and other dry contact monitoring. Beacon & Buzzer-Sound and Flash Led Alarm. Based on pre-set parameters	Mandatory		
3.8.2	Capable for sending Email and SMS Alerts to 5 intended persons in case of emergency.	Mandatory		
3.8.3	Access and monitor the status of critical components through mobile app/browser.	Mandatory		
3.9	Other features :			
3.9.1	The DC Solution would provide much functionality and some of the key functionalities are—Pre fabricated Cabinet with in build Cold and Hot aisle containment	Mandatory		
3.9.2	DC Solution would have provision to add extra racks in future. It should be flexible, adaptable, controllable infrastructure.	Optional		
3.9.3	Rack based Biometric access control system provided should be controlled by access control panel with access control for both front as well as rear doors. IP based Access control with user exclusive authentication	Mandatory		
3.9.4	Rack based Critical Component's for Integrated Server Racks system (Rack, Cooling, Rack PDUs, UPS and monitoring system) must be from single OEM for Seamless Integration & better Service Supports	Mandatory		
3.9.5	Air-conditioning Condenser unit designed for higher efficiency kW/Tr of 0.1 or less	Optional		
3.9.6	Monitoring SNMP Enablement feature to connect to any 3rd party BMS over SNMP	Mandatory		

3.9.7	Electrical Distribution board within Utility Cabinet to have fire detection & Novec Based Fire Suppression system	Optional		
3.9.8	Status based LED Lights within Smart Racks	Optional		
3.9.9	HMI – Graphical User Interface for Smart Racks monitoring	Optional		
3.9.10	Centralise monitoring for multiple DC facility should be possible from single point in NOC center.	Mandatory		
3.10	Uninterrupted Power Supply (UPS) System	Mandatory		
3.10.1	General Description :			
	Supply, installation, testing and commissioning of true online, double conversion, high efficiency, and high-power factor Uninterruptible Power Systems (UPS) rated at 60 kVA with battery backup support for combined 30minutes on full load. UPS & the backup batteries should be supplied with the necessary arrangements for external mounting	Mandatory		
3.10.2	Configuration: 2x60 kVA (True online, IGBT Inverter based, Dual Conversion)	Mandatory		
3.10.3	Scope			

3.10.3.1	<p>1)The scope shall include design, supply, installation, testing and commissioning of the complete UPS system and related accessories including:</p> <p>2)All Server racks will get power feed from two independent UPS systems to ensure redundancy.</p> <p>3)Battery & UPS should be mounted outside of the considered DC area.</p> <p>4)All systems should be tested in factory as per the manufactures recommended procedure for all operating parameters and the test results should be provided during the installation</p> <p>5)Delivery at site, unloading, handling, installation of complete system including interconnection from the UPS system to batteries and to input/output panels switches. All interconnections shall be done using multi-strand Flexible Copper conductor cables of appropriate sizes.</p> <p>6)Scope includes battery bank connections and providing safety barriers for all busbars and cable connection leads on battery racks.</p> <p>7)Energizing of UPS and Battery bank commissioning.</p> <p>8)UPS control parameters setting and complete testing of system on load.</p> <p>9) Service backup by engineer till system is fully operational and subsequently training is to be provided to the concerned persons of the Institute.</p> <p>10) Any upgrade of the system hardware and other associated software during the warranty or CMC period should be supplied at free of charge.</p> <p>11) Acceptance tests will be carried out after installation and the systems will be taken over only after successful completion of the acceptance tests.</p>	Mandatory		
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3.10.3.2	<p>Specification/features of the Each UPS system are as follows:</p> <p>1) Wide input voltage tolerance (+10/-10%)</p> <p>2) Double conversion and IGBT technology</p> <p>3) Rectifier/Battery charger & Inverter</p> <p>4) Batteries to support combined 30minutes full load backup. (Extra backup with external batteries and charger if required)</p> <p>6)Power distribution panels</p> <p>7)Facility for remote viewing</p> <p>8)Easy to expand in a cost-effective way</p> <p>9)Build in Parallel & Load Bus Synchronization ports</p>	Mandatory		
3.10.4	UPS other technical specification			
3.10.4.1	General			
	UPS type - ON-LINE	Mandatory		
	Rating (VA) - 60,000 VA	Mandatory		
	Technology - PWM Switching	Mandatory		
	Crest Factor - 3:1	Optional		
	Invert efficiency - Upto 96%	Optional		
	Overall efficiency - >90% from 50% to 100 %	Optional		
3.10.4.2	Input Ratings			
	Nominal Input Voltage - 415V AC (3-Phase)	Mandatory		
	Permissible input voltage variation at full load - 305 V– 477 VAC or better	Optional		
	Nominal input frequency - 50Hz	Optional		
	Permissible input frequencies variation - 45 Hz to 55 Hz	Optional		
3.10.4.3	Output Ratings			
	Nominal output voltage - 380V (3-phase)	Mandatory		
	Output Voltage regulation - <+/-1%	Optional		
	Output voltage distortion - <2%THD maximum and 1%single harmonic for a 100% linear load <5%THD maximum for a 100% non-linear load	Optional		
	Nominal output frequency - 50Hz	Optional		
	Waveform - Pure Sinewave	Mandatory		

	Power factor - 0.9 lagging	Optional		
	Overload capability - 125% for 10minutes, 150% of full load for 1 minute	Optional		
	Transient recovery time - 20 milliseconds to 1%			
3.10.4.4	Bypass			
	Voltage Range - +15% -20%	Optional		
	Frequency 50/ 60Hz	Optional		
	Frequency Range +/-10%	Optional		
3.10.4.5	Battery Parameters			
	Type - SMF	Mandatory		
	Make - Exide/Rocket/Amaron Quanta	Mandatory		
	No. of battery blocks - 30-40	Mandatory		
	Battery nominal voltage - 12V	Mandatory		
	Battery Voltage - 360-480Vdc	Mandatory		
3.10.4.6	Environmental Parameters			
	Operating temperature - 0 to 45 deg. Centigrade	Optional		
	Storage temperature -15 to 45 deg. Centigrade	Optional		
	Relative Humidity - 95% RH non-condensing	Optional		
	Altitude - 1000 meters	Optional		
	Temperature de-rating - 30-40 deg node-rating	Optional		
	Altitude de-rating - < 1000m; derating according to GB/T3859.2 when higher than 1000m	Optional		
	Noise level <60db	Optional		
3.10.4.7	Monitoring Software - SNMP, Dry contact card, site monitoring	Mandatory		
3.10.5	Installation and Configuration			
	<p>1.The entire system shall be installed as per manufacturer's recommendations & instructions including all interconnections for supply & control circuits.</p> <p>2. All components shall be clearly identified using labels including battery cells individually</p> <p>3. Services of authorized representative or manufacturer for supervision of installation, connections, testing, & adjustments shall be provided.</p>	Mandatory		
3.10.6	Testing and Commissioning			

	<p>1. Under supervision of manufacturer's representative all system functions, operations, protective features shall be checked & pre-set to ensure compliance or specifications.</p> <p>2. Test the system as per recommendations & test listed below using pre-calibrated instruments.</p> <p>3. Simulation of malfunctions to verify protective device operations.</p> <p>4. Duration of supply on emergency. Low battery voltage alarm & shutdown, transfer & restoration of normal supply.</p> <p>5. Remote status & alarm tests.</p> <p>6. In case of test any shortfalls/faults, the same shall be rectified & test procedure shall be again repeated to establish satisfactory performance</p>	Mandatory		
3.10.7	Drawings & Manuals			
	<p>Following drawings & manuals/information shall be submitted in at least THREE copies at appropriate stages & for handing over the system.</p> <p>1. Manufacturer's data for product, features, components & performance along with the offer.</p> <p>2. Operation & maintenance manual with;</p> <p>3. List of recommended spares & replacement components</p> <p>4. Detail operating instructions covering operations in normal & abnormal conditions.</p> <p>5. Shop drawings showing detail fabrication, assembly of components, internal & interconnecting wiring, dimensions, plans & views, installation details access & clearance etc. for approval</p> <p>1. Product certificates for Brought out items.</p> <p>2. Factory test certificates & Inspection report</p> <p>3. Field test reports</p>	Mandatory		

3.11	Precision Air Conditioning System of 20kW Capacity	Mandatory		
3.11.1	Configuration			
	Supply, installation, testing and commissioning of DX Type floor mount Row Based Air-conditioning units designed specifically for high sensible heat ratio with variable cooling technique to match the low latent loads of systems to be installed adjacent to cabinet for effective and uniform distribution of cooling. Ambient air design temperature to be considered is 45 Deg C.	Mandatory		
3.11.2	Direct Expansion			
3.11.2.1	<p>Cooling Circuits</p> <ul style="list-style-type: none"> • One refrigeration circuit, incorporating a high efficiency, fully hermetic variable capacity compressor with crankcase heater, safety valve, filter drier, moisture indicating sight glass, liquid line solenoid valve and an externally equalized expansion valve • Compressor is equipped with pre-set high- and low-pressure switches for protection against high condensing and low evaporating temperatures • The unit shall be provided with additional protection against high ambient temperature. When the temperature goes over the design conditions, the unit remains in operation with partial load (20% decrease against required). If such protection is not sufficient High-Pressure switch shall generate a high-pressure alarm and the unit shuts down - manual reset shall be required • The inclined evaporator coil is manufactured from copper tubes, mechanically bonded to hydrophilic painted aluminum fins, with a stainless-steel condensate drain pan. The large face area/low velocity coil allows precise control of temperature and humidity* during cooling and dehumidification and is designed to optimize fluid velocity and minimize pressure drop • The moisture indicating sight glass, 	Mandatory		

	liquid line solenoid valve and expansion valve for each circuit are mounted in a service compartment, isolated from the air stream, to allow checking and adjustment while the unit is in operation			
3.11.2.2	<p>Fan Section</p> <ul style="list-style-type: none"> Units should be offered with two plug EC Direct Drive Fan, High efficiency, EC motor with integrated electronics, Maintenance free design and construction. The fan section shall be designed for higher air flow. Each PAC unit should be capable of delivering 80-100 CFM per kW. The fan shall be protected from over temperature of motor, electronics, locked rotor protection, short circuit of motor output. Fans are IP54, Protection class F 	Mandatory		
3.11.2.3	<p>Cabinet and Frame</p> <ul style="list-style-type: none"> The unit shall be powder painted panels with ½" (or 10mm) insulation. A hinged control access panel opens to a second front panel which is a protection enclosure for high voltage components. The frame is painted with a powder coat finish to protect against corrosion. The unit is totally front and rear accessible including any component removal. 	Mandatory		
3.11.2.4	<p>Air Filtration</p> <ul style="list-style-type: none"> The filter cells are made of two deep pleated 4" filters rated MERV8 following ASHRAE 52.2 (45% by ASHRAE 52.1) or G4 following EN779, located within the cabinet, and accessible from the rear of the unit. Frame of the filter shall be made of galvanized steel. Clogged filter alarm must be available for standard. 			
3.11.2.5	<p>Refrigerant</p> <ul style="list-style-type: none"> All units equipped with direct expansion circuit are suitable for R410A refrigerant. 			

3.11.2.6	<p>Microprocessor Controller</p> <ul style="list-style-type: none"> • Air conditioning models should be controlled by microprocessor-based controller with Touch Panel. It can be programmed to control the function of every device within the unit via I/O. • The controller shall allow setting and monitoring of the room parameters. Unit utilizes multiple temperature sensors placed at the rack inlet, to ensure management and control of temperature by rack. The controller should allow setting and monitoring of parameters: <ul style="list-style-type: none"> • The controller should allow setting and monitoring of the following space parameters: <ul style="list-style-type: none"> o Air inlet Temperature o Air supply Temperature (remote sensors at rack inlet) o Return Temperature set-point o Supply Temperature set-point o Return Temperature band o Supply Temperature band o Humidity (inlet) o Humidity set-point o Humidity band o Rack Min, Max and Average temperature • The example of available warnings / alarms: <ul style="list-style-type: none"> o High supply temperature, Low supply temperature o High return humidity Low return humidity o Loss of airflow o Compressor Low Pressure, Compressor High Pressure o Electrical heater high temperature (When applicable) o Clogged filter, Customer input (No 4 inputs) o LP transducer fail, Call service (customer input) o High temperature (customer input) o Unit hours exceeded o Compressor hours exceed o Humidifier hours exceed o Supply sensor failure o Network failure o Humidifier problem 	Mandatory		
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	<ul style="list-style-type: none"> o Digital scroll high temperature o Smoke detected o Fire alarm o Rack sensor failure 			
	<ul style="list-style-type: none"> • Following features should be incorporated in the controller: <ul style="list-style-type: none"> o Status Report of the latest 400 event-messages of the unit. o Input for remote on-off and volt-free contacts for simple remote monitoring of low and high priority alarms: high/low temperature, high/low refrigerant pressure, fan/control failure, compressor/control failure and others are available o LAN management: functions provided as standard include stand- by (in case of failure of the unit in operation, the second one starts automatically), and automatic rotation o Automatic restart must be provided after a power failure 	Mandatory		
3.11.2.7	<p>Monitoring</p> <p>1. There should be SNMP and HTTP/Web-management capability for enhanced communications and control of HPM systems. The cards make use of an Ethernet network (100Mbit/1Gbit) to monitor and control a wide range of operating parameters, alarms and notifications to a standard web browser (Internet Explorer). A provision can also be made to make the monitoring possible on the mobile phones.</p> <p>2. The unit shall also include input volt-free contacts for simple remote monitoring of low and high priority alarms: high/low temperature, high/low refrigerant pressure, fan/control failure, compressor/control failure and others are available.</p>	Mandatory		

3.11.2.8	<p>Condenser</p> <ul style="list-style-type: none"> The condenser should be with fan speed controller designed & set for usages of R410A refrigerant. Condenser should work at 0 deg C to 45 deg C ambient temperature. The motorized fan shall be IP54, protection class F 	Mandatory		
3.11.2.9	<p>Additional Features – Humidifier</p> <ul style="list-style-type: none"> The unit is fitted with a canister type steam humidifier suitable for use with water of varying degrees of hardness, provided that the water is not treated or demineralized (Conductivity range 125-500mS/cm). The humidifier is complete with a water inlet valve, water outlet valve and a maximum water level sensor, disposable cylinder, steam distributor and electronic controls. Humidifier control is of the ON-OFF type, can be also disabled by remote contact (Optional - humidifier and reheat lockout). Humidifier is removable from the rear of the cabinet 	Mandatory		
3.12	Racks & Accessories			
	<p>Rack Containment Frame is 42 U, 19" mounting type with standard Rack + Cold + Hot Aisle Containment for all the 10 racks. Base Plinth of 100mm with safe load carrying capacity of 1000kG, Vertical Cable manager on both LHS & RHS at rear side. Front glass door & rear steel split door for complete 42U height visibility. Thermally insulated cold aisle chamber. Blanking panels to prevent air mixing. Fixed Shelf. Status based LED lights</p>	Mandatory		
3.13	Safety and Security Systems			

3.13.1	<p>Fire Alarm and Fire Suppression System</p> <p>The integrated infrastructure solution should be designed as a complete stand-alone unit with security, fire detection and fire suppression systems. Each of the systems is inter-operable and inter connected. Environmentally friendly NOVEC1230 agent should be used to ensure that no harm to human beings and environment is caused. Following systems should be installed.</p> <p>1) NOVEC 1230 Clean Agent for fire suppression system</p> <p>2) Fire detection and alarm systems, with detectors and panel.</p> <p>3) Protected area: The entire volume of the server racks shall be protected with fire detection and fire suppression system. The doors should be secured by Access Control system</p> <p>5) The NOVEC 1230 system shall be designed and installed as per NFPA 2001-2012 Edition. SMPV, Petroleum and Safety Explosives Organization (PESO) approved cylinder filled with NOVEC 1230 is installed.</p>	Mandatory		
3.13.2	Rodent Repellent System	Mandatory		
3.13.2.1	The proposed Smart Racks/cabinets should be covered by Rodent Repellent System	Mandatory		
3.13.3	Biometric Based Access Control	Mandatory		

	<p>The IP based Access Control System shall be used to serve the objective of allowing access to authorized personnel only. The system deployed will be based on Biometric Technology. The front & rear rack doors will be provided with magnetic locks, and will operate on fail-safe principle through one common Biometric access control system</p> <p>The system would be designed and implemented to provide following functionality:</p> <ul style="list-style-type: none"> • Configurable system for user defined access • Built-in Real Time Clock (RTC), calendar; complete Database stored locally and shall be capable of operating offline on standalone mode • Record, report and archive each and every activity (permission granted and / or rejected) with log formats • Fail safe operation in case of no-power condition and abnormal condition such as fire, theft, intrusion, loss of access control, etc. • At the biometric reader, user presents the finger to the biometric reader which is unique to each employee. The pattern is read and compared with stored data to grant / deny access 	Mandatory		
3.13.4	Water Leak Detection System	Mandatory		
3.13.4.1	The proposed Smart Racks/cabinets should be covered by WLD	Mandatory		
3.13.5	CCTV System	Mandatory		
3.13.5.1	Supply and installation of CCTV System for integrated data center infrastructure along with Display Unit with sufficient Storage for 30 days	Mandatory		
	<p>The Critical area of the Data Centre needs to be under constant video surveillance. The primary objective of implementing a CCTV system is to ensure effective surveillance of the area and create a record for post event analysis. Monitoring cameras should be installed in proper area to cover critical area of the data center</p>	Mandatory		

	The CCTV system shall provide an on-line display of video images on monitor. LED/LCD monitor shall be provided by client. Cameras with suitable lenses shall be used to view all the critical areas of the Data Centre. The CCTV system shall be based on the use of fixed dome cameras with NVR & suitable Hard disc for storage	Mandatory		
	The CCTV System proposed to fulfil the overall surveillance / observation requirements and enhance the level of security necessary shall be complete in all respects	Mandatory		
3.13.6	VESDA System	Mandatory		
3.13.6.1	The proposed Smart Racks/cabinets should be covered by VESDA System with proper alarming system attached	Mandatory		
3.14	Remote Monitoring	Mandatory		
	Supply and installation rack mountable monitoring system with Sensors & notification system. The system shall continuously collect critical information from network connected devices such as, temperature & humidity sensors, Water Leak sensor and other dry contact monitoring. Beacon & Buzzer-Sound and Flash Led Alarm. Based on pre-set parameters, automated email alerts are sent to the intended recipients and mobile app-based monitoring.	Mandatory		
	1) Intelligent Rack environment remote monitoring	Mandatory		
	2) Modbus 485 Communications	Mandatory		
	3) SNMP Communication	Mandatory		
	4) Single window for monitoring all sensors	Mandatory		
	5) Data and logs of historical information of alarms and notification	Mandatory		
	6) Temperature & Humidity Sensor, Door Sensor, WLD Sensor, Smoke Detection sensor. Alarm device with LED flash and sound option	Mandatory		
3.15	HMI – Smart Racks Graphical Interface	Mandatory		

	<p>Smart Racks should have functionality to graphically monitor the passive infrastructure ----</p> <ol style="list-style-type: none"> 1. HMI-with 9-inch, LCD display, to display live data of Power, cooling, and environmental health 2. HMI should display complete dashboard for Smart DC solution. It should be menu driven system, Thermal management, Power supply environmental quantities, alarms, logs, and provided a total of menu items, breakdown of the sub-menu item the next menu level. 3. The HMI to show Temp, humidity, for every rack with average of Top, mid and Bottom Point. 4. Live Graphic representation of supply and return Air temp 	Optional		
	<p>System performance parameters:</p> <ol style="list-style-type: none"> a) Enclosures: thermal path average temperature, the IT load cabinet single cabinet b) Air conditioning: return air temperature, supply air temperature. All the components shall be graphically represented on HMI 	Mandatory		
	<p>Critical system parameters:</p> <ol style="list-style-type: none"> a) UPS operation: AC mode/bypass mode/Battery mode/standby mode, The system load factor b) HVAC Operation – Animated fan during Run & Compressor status display IT racks parameters – Temp. & Humidity Parameters are highlighted for normal & abnormal values 	Mandatory		
	<p>Thermal Management:</p> <ol style="list-style-type: none"> a) Return air temperature profile cross-ordinate b) cooling fan state to the operating state, the corresponding icon is animated; alarm flood state is, icon animation. Door status icon static display, the door opened and closed the door to a different style static icon. 	Mandatory		

	<p>Supply & Distribution:</p> <p>a) UPS page displays for the distribution parameters and real-time power system operating mode</p> <p>b) UPS working state: AC mode / bypass mode / Battery mode / standby mode</p> <p>c) The operating state of the system: Single / 1 + 1 parallel / 2N double bus</p> <p>d) For each PDU distribution -PDU page displays the total current and power component</p> <p>e) when the PDU voltage value, the current value exceeds the set range, the system will generate a corresponding alarm; on the contrary, the alarm disappears</p>	Mandatory		
	<p>Environmental Amount: (The amount of ambient acquisition)</p> <p>a) acquisition and display status of the current environmental data amount of the rack, comprising: a real-time value of the respective collection point temperature and humidity sensors, front and rear door state, hot/cold aisles average temperature curve moisture profile</p> <p>b) When the air conditioning is working properly, hot and cold airflow patterns dynamic channel is turned on when the air conditioning is not working, dynamic airflow patterns hot and cold aisles disappear</p> <p>c) Door status icon static display, the door opened and closed the door to a different style static icon</p> <p>d) when the passage of hot / cold temperature and humidity sensor measured value exceeds the set range, the system will generate a corresponding alarm; conversely, when the hot / cold aisles temperature and humidity sensor measurement range is set to fall the alarm disappears</p>	Mandatory		

	<p>Warning – Alarm-Current Alarm:</p> <p>a) Displays the Current Alarms Page</p> <p>b) The current alarm is divided into emergency alarms, major alarms and general alarms</p> <p>c) When the current alarms and buzzers system in the normal mode, the LCD buzzer will sound an alarm, and for 5 minutes, the duration of the latest alarm generation time from a timer In maintenance mode, the buzzer will not sound an alarm. After the lifting of maintenance mode, buzzer return to normal mode</p>	Mandatory		
	<p>Alarm - historical alarm:</p> <p>a) Alarm History page provides a display system and screening history alarms</p> <p>b) LCD page provides only historical records up to 100 within the system one week. For longer or more the number of alarm history, Web pages can be viewed in alarm management</p>	Mandatory		
3.16	Cleaning			
	<p>1) On completion of installation, testing of the system all components, cabinets etc. shall be cleaned & unwanted material, debris shall be removed from site</p> <p>2) Scratches dents if any shall be cleaned & touched upto match the original finish</p> <p>3) Cable and electric wire should be arranged in a way that minimize the physical tempering with the existing infrastructure and should be properly managed maintaining the aesthetics</p>	Mandatory		

3.17	<p>Maintenance and Support After Sale Service</p> <p>1.Service shall be guaranteed by supplier during defect liability period / guarantee period.</p> <p>2.Product OEM shall offer the Data Centre with 24x7 services through their authorized service engineer for a period of at least 1 year.</p> <p>3.Product OEM shall provide ONSITE warranty for 3 Year from the date of taking over of the equipment after the acceptance tests. Two year onsite warranty should be provided on items specifically written in this tender.</p> <p>4.Basic training and operational training to be provided after the successful installation of DC</p> <p>5.Quarterly PM to be carried out during the CMC period</p>	Mandatory		
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PART B

Civil, Electrical, HVAC and MEP Services

A. CIVIL & INTERIOR WORKS

The bidder will design, supply and carry out Civil/Interior works with given layout for accommodating functional areas like Data Center area and Electrical Room for the proposed Data Center.

Sr. No.	Description	SCOPE OF WORK	UNIT	Qty
1	<u>Demolition & Removal</u>	Demolition & removal of block work, tiles etc and carting away the debris from site to designated dumping ground.	L.S.	
2	<u>Pest control</u>	Providing Pest Control & Anti Termite Treatment by appointing a specialised an agency as per the specifications mentioned by the bureau of Indian Standards Specifications for General Civil, Plumbing /Drainage & Timber / Carpentry Works, Including at least 3 year guarantee etc, complete as directed.(Mode of measurement to be on carpet area of floor and not the area of surface treated)	Sq.Ft.	
3	<u>POP punning</u>	Providing & applying POP punning to be required thickness of plaster of paris applied over selected existing plastered surface on walls and columns finished smooth, inclusive of surface preparation. The finished surface should be smooth and in perfect level so as to avoid unevenness and ready to take on paint. Rate include making grooves 6mm wide in the POP at the junction/end of walls or as directed,pattas,sills,etc. complete.	Sq.Ft.	
4	<u>Metal Grid Ceiling</u>	Metal Grid Ceiling: Providing and Installing Commercial type suspended metal false ceiling to consist the following: General Requisites: Grid system to consist of main runner @ 600mm and joined by rotary stitched cross tees @ 600mm to form overall grid opening of 600mm x 600mm and shadow line wall angles all-round the wall. Additional Cross tees are to be placed where appropriate for light fixtures, AC Diffusers. Main Runner - 15mm x 44mm x 3600mm Cross Tees - 15mm x 44mm x 3600mm Tile - Plain Metal Tiles	Sq.Ft.	

5	<u>False Flooring 600x600mm</u>	Supply & Installation of FAF 800, 600x600 mm, 35 mm thick, includes a 1.2 mm thickness Anti-static High pressure Laminate (HPL) Shade - 8192 with top performance finish of HPL with ESG under structure system (suitable for finish floor height of up to 600 mm with 1400 kgs/sqm UDL, 362 kgs of point load.) with ramps of approved design wherever denoted by the PM and L-angle support at cut tiles for rigidity of the system.	Sq.Ft.	
6	<u>Core-cutting</u>	Providing core cutting of required diameter in the slab employing a specialized agency for the same.		
	<u>a</u>	4" dia	No.s	
	<u>b</u>	6" dia	No.s	
7	<u>Signages</u>			
	<u>e</u>	Signage for various rooms & Department	No.s	
	<u>f</u>	Fire extinguishers / Exit signage in Fluorescent Auto glow.	No.s	
	<u>g</u>	Emergency Escape Route Plan A3 Size (Auto glow type).	No.s	
8	<u>Gyp False Ceiling</u>	Providing and fixing Gypsum false ceiling of India Gypsum make which includes G.I.Perimeter channels of size 0.55mm thick (having One Flange of 20mm. And another flange of 30mm and a web of 27mm) along with perimeter of ceiling, screw fixed to brick wall/partition with the help of Nylon sleeves and screws at 610mm centres. Then suspending G.I.intermediate channels of size 45 mm (0.9mm thick with 2 flanges of 15mm each) from the soft at 1220mm centres with ceiling angle of which 25mmx10mmx0.55mm thick fixed to soffit with G.I.cleat and steel expansion fasteners. Ceiling section of 0.55mm thick having khurled web of 51.5mm and 2 flanges of 26 mm each with lips of 10.5mm are then fixed to the intermediate channel with the help of connecting clips and in direction perpendicular to the intermediate channel at 450 mm centres.	Sq.Ft.	
9	<u>Cove Light in Gypsum ceiling.</u>	Providing 4" or 6" 'L' shape Cove light with vertical in Gypsum ceiling for indirect lighting..	Rft	

10	<u>Modular false ceiling</u>	Providing and fixing modular ceiling system with fibre board ceiling tiles as per following specifications. Rate to include all fastening accessories with approved finishes. Ceiling tiles shall be Supreme RH 99 (Armstrong) make) regular edge tiles of size 600mm x 600mm. Tiles shall render a NRC Level of 0.5. Suspension system shall be manufacturer specification exposed grid system with 15mm wide silhouette black reveal grid, Installation to comprise of main runners spaced at 1200mm center securely fixed to the structural soffit by approved hangers at 1200mm maximum centres and not more than 150mm from spliced joints. The last at the end of each main runner should not be greater than 600mm from the adjacent wall	Sq.Ft.	
11	<u>Ply backing for mineral fibre tiles</u>	Providing and fixing 6mm ply backing of size 600mm x 600mm on modular false ceiling grid to support light fittings speakers, cameras diffusers of grid work etc. with necessary cut outs for the same.	Nos	
12	<u>Double skin Gypsum Partition</u>	P/F Gypsum Dry wall section Double Skin of 100 mm, the partition shall be of 2 layer of tapered edge 12.5mm gyp board screw fixed with Philip screw of at 300mm c/c to either side of 48mm studs (Gypsteel Ultra). GI sections to be placed at 600 mm c/c in 50mm floor and ceiling channel 0.55mm thick having equal flanges of 32mm made of GI steel with joints staggered to avoid leakage through joints. The balance hollow in the partition to be filled with(pre-approved) glass wool for insulation.	Sq.Ft.	
13	<u>Full height Glass Partition</u>	Providing and fixing Toughened Glass partition consisting of 12mm thick clear glass of approved make fixed on Aluminium Extruded anodized profiles. Cost to be inclusive of joints between glass to be filled with clear silicon sealant with all accessories & fittings.	Sq.Ft.	
14	<u>Partition above False Ceiling</u>	Providing and fixing Aluminium Framework partitions above ceiling fabricated with 2" x 1" aluminium section framework @ 600mm c/c both ways and covered with 12mm thk Gypsum Skin on one sides. Cost of partition to be inclusive of (pre-approved) Glass wool insulation material . Alternate members of the framework to be anchored to the true slab.	Sq.Ft.	
15	<u>Laminate Skinning</u>	Providing and skinning 1.0mm thk Satin Finish Laminate of approved make, color and shade over ply panelling / partitions etc. cost to include making grooves as per the details & instructions of the Architects. Basic Rate : Rs. 40/-psft Make- Marino, Greenlam	Sq.Ft.	

16	<u>Ply boxing</u>	Providing and fixing ply boxing which includes 19mm/12mm thick commercial plywood of approved make fixed on aluminium frame work of section 2" x 1" in straight / curved shape in level & plumb. (Raw finish)	Sq.Ft.	
17	<u>Ply panelling</u>	Providing and fixing 12mm ply panelling on wall, column or framework as required to receive laminate/veneer (Raw finish)	Sq.Ft.	
18	<u>Niche Treatment on Partition/ storages</u>	P/F Niche boxing made out of commercial Plywood to receive duco paint/ Laminate / veneer finish as per details of the Architect. Average size of niche:- 12 " x 12" as per design.	Sq.Ft.	
19	<u>Aluminium Skirting</u>	Providing and fixing 50mm high aluminium skirting as specified at locations as indicated by the architect.	Rft	
20	<u>DB & Fire panel Storage</u>	P/f Storage made out of 19mm comm. ply Shutters to have Aluminium grill louvers for ventilation panel. Shutters will be provided with Glass vision panels as required for Fire panels.	Sq.Ft.	
21	Painting			
21.1	<u>Plastic -Acrylic emulsion for Ceiling.</u>	Providing and applying three coats of plastic emulsion paint of Asian/ICI/ Berger make to all internal wall/ceilings of approved colour over a coat of water based primer including preparation of surface by thorough cleaning and wetting and applying readymade putty fully to give a smooth and even surface before painting and curing.	Sq.Ft.	
21.2	<u>Metallic / Design paint - Asian Paint.</u>	Providing & Appling two coats pigmented surface Metallic of desired shade. Rate shall include preparation of base surface watering before and after application. scaffolding, tools and plants etc. Complete as directed.	Sq.Ft.	
21.3	<u>Lustre Paint</u>	Providing and applying three coats of Lustre enamel paint of desired shade of Asian/ICI/ Berger make to all internal wall surface wherever required at all heights to give an even and uniform shade, applied over a coat of primer and putty fully to give a smooth and even surface including thoroughly brushing the surface free from water.	Sq.Ft.	
21.4	<u>Fire retardant paint</u>	Providing & applying Fire retardant paint of approved make.	Sq.Ft.	
22	<u>Fire rated doors</u>	Doors :		
22.1	<u>Fire rated Door 1500x2400 (D6)</u>	Supply and Installation of Fire rated Metal Door with vision panel as per detail dwg - D6 Type Size: 1500 X 2400 Double leaf (1200x 2400 & 300x 2400) 120min fire rated doors with all hardware, accessories etc for DC main entry. Cost to include Door Frame, holdfast and necessary fixing & complete.	Nos	

22.2	<u>Fire rated Door 1200x2400 (D5)</u>	Supply and Installation of Full Core Solid Door with vision panel as per detail dwg - D5 Type Size: 1200 X 2400 Single leaf 120min fire rated doors with all hardware, accessories etc for DC. Cost to include Door Frame, holdfast and necessary fixing & complete.	Nos	
22.3	<u>Fire rated Door 1000x2400 (D4)</u>	Supply and Installation of full core solid Door with vision panel as per detail dwg - D4 Type Size: 1000 X 2400 Single leaf 120min fire rated doors with all hardware, accessories etc for DC.	Nos	
22.4	<u>Glass Door 900x2400 (D3)</u>	Supply and Installation of 900 X 2400 Single leaf toughened glass doors on floor spring with all hardware, accessories etc for Office Area	Nos	
22.5	<u>Fire Glass Partition</u>	Same as above but Side Partition in FR Glass with metal frame as per manufacturer's specs. Size: 4950 x 1200	Sq.Ft.	
23	<u>FURNITURE</u>			
23.1	<u>VC Room Table</u>	Providing & Fixing Meeting table made of 19mm comm. Ply finished in Veneer, the table top will be finished in polyester lamination & base to be in melamine, provision for cable management, POP box of ebco / innofit make (6nos with 2power, 2 data outlets) as per design & details of the architect. Size of table -15'0"L x4'0"W.	No	
23.2	<u>Full Height Storage</u>	Providing and fixing full height Storage of Size 1050wdx depth 400 mmx 2100 ht finished in 1.00mm thk laminate of approved shade and color as per the selection & design of the architect.	Sq.Ft.	
24	<u>MISCELLANEOUS WORKS</u>			
24.1	<u>Frosted Film</u>	Providing and fixing frosted film of 3M Sparkle film or approved equivalent make on Glass Partition with laser cutting design in pattern as per drawings complete. Basic cost 120/- Sft.	Sq.Ft.	
24.2	<u>Roller Blinds</u>	Providing & fixing roller blinds comprising of polymer coated fibre fabric with minimum openness factor. The roller mechanism shall be a moulded unit made from engineering grade plastic polymer with steel spring support. The fabric shall be finished on the sides with edge tape duly welded for waviness control. The fabric shall be attached to the roller tube with high quality self-adhesive tape. Basic cost 150/- Sft	Sq.Ft.	

24.3	<u>Glass Writing Board</u>	Providing and fixing Glass board panel of size as per drawing consisting of 8mm thick back painted toughened extra clear glass of modifloat or equivalent make , supported on 25mm dia brushed SS studs with necessary 12mm thick commercial ply reinforcement inside in back partition for strong support to take glass weight.	Sq.Ft.	
24.4	<u>Soft Board</u>	Providing and fixing Fabric wrapped soft board panels 12mm thick of size and profile as per details in 19mm x 50mm 6mm ply backing The rate should include approved fabric (Basic price Rs. 150/-Rmt) foam infill as per approved specification with necessary 12mm thick commercial ply reinforcement in the partition. Note the fabric shall be stretched uniformly along the direction of weave and shall be wrinkle free PVC Grippper to be included in the cost.	Sq.Ft.	
24.5	<u>Acoustic Board Panel</u>	Providing and fixing 12mm thk. Acoustic board panel, as per architects design.	Sq.Ft.	
25	<u>CHAIRS</u>	Providing and Installing Chairs (net back) but with single point contact and an adjustable arm rest		
25.1	<u>a</u>	Medium Back Chairs Basic Cost : 5000/-	Nos	
25.2	<u>b</u>	High Back Chairs (Cabins + VC) Basic Cost : 7000/-	Nos	
26	<u>FINISHING WORKS</u>			
26.1	<u>Carpet</u>	Providing and fixing carpet of approved shade and color of Unitex or equivalent make Basic Cost of Carpet Rs. 150/-	Sq.Ft.	
26.2	<u>Painting Artwork</u>	Providing & fixing Painting Artwork in canvas with wooden framing as per selection of Architect. Basic rate Rs.11,500/-	No	
26.3	<u>M.S. Fabrication for Ramp</u>	Fabricating M.S. ramp, Steps as per design, incl. 'I' section and chequered plate covering.	Sq.Ft.	
26.4	<u>Wall paper</u>	Providing and fixing wallpaper of approved design and color of KRAFT/ EGO/ MARSHALL neatly fixed with proper adhesive , joints to be matched properly, cost to also include surface preparation incl. one coat of primer. Basic Cost Rs. 200/-	Sq.Ft.	
26.5	<u>House keeping</u>	Providing Housekeeping services for the entire duration of the project incl. deep cleaning with vaccum cleaner through professional agency. Min. 4 labour during project on daily basis & 8 to 10 person for deep cleaning at handover stage.	Job	

B. ELECTRICAL WORKS, CABLING AND POWER DISTRIBUTION PANELS

The bidder will design, supply and carry out Electrical works for accommodating functional areas like Data Center area and Electrical Room for the proposed Data Center.

Sr. No	Scope of Work - Electrical	Unit	Total Qty
A	PANEL & DBs		
1	Supply, Installation, Testing & Commissioning of Following Panels and electrical works as per below specs and with 100% redundancy system (N+N) .		
	Floor/wall mounted cubicle type panel, Fabricated from 14/16G CRCA sheet steel ,Totally compartmentalized, 7 tank powder coating treatment for rust proofing, with separate busbar chamber & cable chambers ,Front /Back access for switchgears, connectors etc. Suitable for 430 V, 3 phase / 4 Wire System , 50 Hz supply,50 Deg Celcius ambient temp,Class 1 Type with 15VA burden, Provisionn for control wiring diagram, 3 MM openable gland plate on top and bottom of panel, 75 MM height channel base frame to panel. Proper labelling shall be done all chambers of panel showing feeder rating and location		
1.1	MAIN LT panel with Aluminium busbar - 250Amps	Nos	
	200 A MCCB- 25KA TPN Incommer- Microprocessor based with 200A Manual changeover switch		
	Load manager with RS 485, RYB , ON OFF TRIP, with control mcb, EFR with CBCT		
	125A TPN MCCB - 4 nos, 25ka		
	25A 2P MCB- 8 nos		
	32A 4P MCB - 2 nos		
	Floor mounted fabricated panel with 300mm MS stand		
	Separate cable chamber with Terminals		
1.2	40A 4P MCB with box IP 44	Nos	
1.3	25A 2P MCB and socket for split AC	Nos	
1.4	UPS OP panel with 125A TP +2N MCCB incommer	Nos	
	100A 3P+2N MCCB- 2 Nos		
	32A 2P MCB- 3 nos		
	Fabricated box		
	Electro plated Cooper busbar		
2	Supply, Installation, Testing & Commissioning of Distribution Boards complete with MCBs/Isolators/ Bus bars and interconnections. No fabricated DBs shall be allowed. Only DBs of specified makes as per list of materials shall be used all MCB 10 kA. (All DB will have MCB numbering, DB chart, DB number), DB should be fixed with Anchor fastener to wall with proper GI L angle fixed to wall. Proper earthing should be provided to DB body at 2 places. Cable tray , raceway used for DB drop, shall be earthed to DB earthing with 12 SWG CU wire and lugs		

2.1	TPN as follows (LDB)- Wall mounted MCB double door DBs,fabricated from 16/18 G CRCA sheet steel with powder coated, and all fixing hardware. DB size should be suitable for Below mentioned MCB combination-for Terrace	each	
	Incomer 32A 4P MCB		
	32A DP RCCB , 30ma- 3 nos		
	Outgoing 10/ 16A SP MCBs -18 Nos.		
2.2	TPN as follows (UDB)- Wall mounted MCB double door DBs,fabricated from 16/18 G CRCA sheet steel with powder coated, and all fixing hardware. DB size should be suitable for Below mentioned MCB combination	each	
	Incomer 32A 2P MCB- 1 No. D Curve		
	Outgoing 16A SP MCBs -12 Nos.D Curve		
2.3	SPN as follows (ELDB)- Wall mounted MCB double door DBs,fabricated from 16/18 G CRCA sheet steel with powder coated, and all fixing hardware. DB size should be suitable for Below mentioned MCB combination	Sets	
	Incomer 20A DP RCCB- 1 No. 30ma		
	Outgoing- 10A SP MCB 12 nos.		
B	Cable and wiring		
1	SITC of Aluminum / Copper armoured XLPE ,FRLS Grade PVC Insulated cables as per IS 1554 to be fixed to walls, ceilings, on trays with suitable GI clamp, cable tie at every 450 mm or to be laid in ready-made trench . Cable tagging shall be done at both the ends of cable. Arrow marking shall be done at panel end to show flow direction of current.		
a	3.5 Core 240 sq. mm. AYFY.	mtrs	
b	3.5 Core 50 sq. mm. AYFY.	mtrs	
c	4 Core 25 sq. mm. AYFY.	mtrs	
d	4 Core 16 sq. mm. AYFY	mtrs	
e	1 Runs x 25 sq. mm. CU flex in PVC PIPE	mtrs	
f	1 Runs x 10 sq. mm. CU flex In PVC pipe	mtrs	
g	4 Core16sq. mm Cu Arm YWY	mtrs	
h	4 Core10sq. mm Cu Arm YWY	mtrs	
i	3 Core 10 sq. mm Cu Arm YWY	mtrs	
j	4 Core 6 sq. mm Cu YWY	mtrs	
k	3 Core 4 sq mm Cu YWY	mtrs	
l	3 Core 2.5 sq mm Cu YWY	mtrs	
m	4 Core 2.5 sq. mm Cu YWY	mtrs	
2	SITC of cables with Heavy duty Alu/ Cu. Lugs & Brass cable glands. All Cable should be Double compression gland for 16 Sqmm and Above cables. The glands should be earthed along with brass clips for Earthing. Bimetallic washers shall be utilise for Aluminium cables for terminations with cu busbar.		

a	3.5 Core 240 sq. mm. AYFY.	nos	
b	3.5 Core 50 sq. mm. AYFY.	nos	
c	4 Core 25 sq. mm. AYFY.	nos	
d	4 Core 16 sq. mm. AYFY	nos	
e	1 Runs x 25 sq. mm. CU flex in PVC PIPE	nos	
f	1 Runs x 10 sq. mm. CU flex In PVC pipe	nos	
g	4 Core16sq. mm Cu Arm YWY	nos	
h	4 Core10sq. mm Cu Arm YWY	Nos	
i	3 Core 10 sq. mm Cu Arm YWY	nos	
j	4 Core 6 sq. mm Cu YWY	nos	
k	3 Core 4 sq mm Cu YWY	nos	
l	3 Core 2.5 sq mm Cu YWY	nos	
m	4 Core 2.5 sq. mm Cu YWY	nos	
3	SITC of 1.6 mm thick GI Perforated type cable Trays of Asian /Profab / Equivalent make The cable tray shall be fixed to the ceiling/ wall with suitable size of GI clamp, appropriate dia threaded rod & 35mmx2mm thick GI slotted 'C' channel Patti OR suitable size of MS angle support (MS support to be painted with two coats of red oxide & two coats of enamelled paint).Supports to be provided at an interval of 800mm or lesser depending upon the location. The rate shall include the cost of GripeSupports/ GI rods and MS angle support .		
a	Cable Tray=100mm wide x50 mm height. IBMS works, DATA works, Electrical works in passage	Mtrs	
b	Cable Tray=150 mm wide x50 mm height. IBMS works, DATA works, Electrical works in passage	mtrs	
c	Cable Tray=200 mm wide x50 mm height. IBMS works, DATA works, Electrical works in passage	mtr	
d	Cable Tray=300 mm wide x50 mm height. Electrical works, IBMS , data inside shaft works	mtr	
e	Cable Tray=450 mm wide x50 mm height. Electrical works, IBMS , data inside shaft works	mtr	
f	Cable Tray=600 mm wide x75mm height. Electrical works, IBMS , data inside shaft works	mtr	
4	SITC of Powder coated 100mmx 75mm GI Trunking 2mm thick with cover to be used for running the wires/cables near Db and DB drop. Trunking to be fixed on Wall or flooring with suitable size of GI clamp, appropriate dia threaded rod & 35mmx2mm thick GI slotted 'C' channel Patti OR suitable size of MS angle support (MS support to be painted with two coats of red oxide & two coats of enamelled paint). The rate shall include the cost of Supports . Trunking should have knock outs on both side at each 600mm distance as per site requirements.	mtr	
5	Fabrication in MS .The rate shall include the cost for painting with 3 Coats of enamelled / metal applied after rust treatment of two coats of red oxide. The colour of the paint & cable trays shall be as approved by Architect.	Kgs	

6	SITC of Light Point wiring through 20/25 mm MS CONDUIT with all required accessories with 2 Nos of 1.5 sqmm & 1 no of 1.5 sqmm (for earth) PVC insulated Copper FRLS wires with Modular type switches complete with all accessories as detailed in the specifications. The switch boxes shall be flush mounted with partition /walls works or as directed by the consultants and shall be done in co-ordination with furniture works. The rate shall include circuit wiring From LDB to Switchboard Box & Switchboard Box to Switchboard . 2 Nos of 1.5 sqmm & 1 no of 1.5 sqmm (for earth) Copper conductor PVC insulated FRLS Wire , conduit, back box, switch plate and modular type switch . Conduit shall be fixed on wall / trays or ceiling with spacers & saddles. The wires will be terminated in a separate connector before fixtures. All phase neutral and earthing wire shall be terminated in SB level. No direct looping of Neutral and earthing shall be done. All circuit/ Looping circuits shall have ferrule on both ends and shall have lugs on both end. Circuit and point wire shall have same colour code. Switch board have proper stickering showing DB and circuit number. wall chasing and back filling will be in scope of electrical contractor wherever required		
a	Primary light points (Switch control) 3 x 1.5 Sqmm Cu FRLS PVC insulated wires	Nos	
b	Secondary light points with 3 x 1.5 Sqmm FRLS wires PVC insulated wires (Loop points after primary points)	Nos	
c	DB MCB controlled primary point with 3 x 1.5 Sqmm Cu FRLS PVC insulated wire	Nos	
d	Secondary light points with 3 x 1.5 Sqmm Cu FRLS PVC insulated wire (Loop points after MCB controlled primary points)	Nos	
e	Wiring for PIR sensor from cabin SB to sensor and till first light point	Nos	
f	Primary light points (Switch control) 3 x 1.5 Sqmm Cu FRLS PVC insulated wires for emergency lights	Nos	
g	Secondary light points with 3 x 1.5 Sqmm Cu FRLS PVC insulated wires .for emergency lights	Nos	
h	DB MCB controlled primary point with 3 x 1.5 Sqmm Cu FRLS PVC insulated wires .for emergency lights	Nos	
i	Secondary light points with 3 x 1.5 Sqmm Cu FRLS PVC insulated wires .for emergency lights	Nos	
C	POWER OUTLETS		
1	Supply, Installation , Testing & Commissioning of following Power Sockets mounted with specified switchgear inside the specified enclosure confirming to .The rate to include termination of incoming wires/cables with appropriate size of lugs & applicable PVC/Brass cable glands		
a	25 Amps two Pin & Earth ,Single phase metal clad socket with MCB and box	set	
b	16 Amps two Pin & Earth ,Single phase IP 44 PLUG and socket with MCB and box	set	
c	32Amps two Pin & Earth ,Single phase IP 44 socket w(IEC 60309-1/60309-2) with box Heavy duty type with inclined handle	set	

d	63 Amps three Pin + Neutral+Earth ,three phase IP 44v socket with with MCB with box ((BCH Type) Heavy duty cat -DS6A7A1 and DS6B7A1 for kitchen	set	
e	Supply & Fixing of RG 6 TV socket with Approx. 35 Mtrs cable in pvc conduit	Nos	
2	SITC of modular type shuttered power sockets, data-outlets, telephone sockets complete with chrome-plated mounting box. The switch box shall be fixed in partition works. The rate shall be inclusive of connecting of switches / sockets. . Proper care to be taken while passing wires from bends, wire entry from floor JB to modular, bends in module. Contractor shall use PVC Sleeves to avoid damage of ware. All sockets shall have label with DB and circuit number. All main circuits shall have numbered ferrules. All circuit and looping wire color code shall be same.		
a	3 Nos of sockets 6A/13A installed below table and controlled by 1nos 15A switch below table - Double cover type face plate	set	
b	2 Nos of Universal sockets 5A controlled by 5A switch (for UPS Power) for workstations / BMS. This combination shall be measure as one single point for wiring. PVC box shall be provided to socket	set	
c.1	1No. of 6A Switch & socket combine for without back box for workstation raw power. Double cover type face plate	Set	
c.2	1 Nos of sockets 6A 3pin controlled by 6A switch Power Switch Socket combine with indicator Complete with G.I. mounting box for VAV Boxes, FCU , AV points, Low voltage equipments.	set	
d	1 Nos of sockets 16A 3pin controlled by 16A switch Power Switch Socket combine with indicator complete with G.I. mounting box for Convenience sockets. Double cover type face plate	set	
e	2 way switch wiring wiring for executive cabins with wiring	Nos	
3	Back boxes required for data voice outlets boxes on wall or partitions	Nos	
4	SITC of modular type Under floor modular boxes of 300mm x 300mm x 65mm with double door. Top cover will be hinged cover with minimum depth of 70 mm with 2nos 15 Amp Switch Socket 2 nos Data Point 2nos Voice Point	Nos	
5	SITC of Circuit Mains wiring for work station and cabins Power sockets direct from DB and then looped with nearest socket.		
a.1	Circuit wiring - 3C x 2.5 sq.mm. Cu conductor PVC insulated FRLS wires for UPS points on table , workstation, cabin furniture - UPS-4 points per circuit	Mtrs	
a.2	Circuit wiring - 3C x 2.5 sq.mm. Cu conductor PVC insulated FRLS wires for RAW points on table , workstation, cabin furniture - RAW- 4 sockets per circuit	Mtrs	
a.3	Circuit wiring - 3R x 2.5 sq.mm. Cu conductor PVC insulated FRLS wires in 25 MM FRLS PVC conduit in ceiling, partitions, floor for RAW points , UPS points	Mtrs	
b	Supplying and laying of CAT-6 cable make through already laid raceways/conduit from racks to work station as directed (The rate shall include the cost of 1.6 mm wall thickness PVC conduits & all accessories) for light dimming	mtr	
c	Circuit wiring - 3C x 6 sq.mm. Cu conductor PVC insulated FRLS wires for UPS points on table , workstation, cabin furniture - server and hub room sockets	mtrs	
D	MISCELLENIOUS WORK		

1	50 MM, 3M long dia GI Rod, Chemical earthing system with Chamber cover with civil brick works, test link with 4 nos SS nut bolts , and proper marking on earthing cover shall be provided for body earthing	Nos	
2	SITC of main earth stations comprising of 600 * 600 * 6 mm GI plate buried 4.0 meters below ground with adequate coal & salt covering as per IS standards 3043, Including 10 mtrs long GI pipe with funnel, Chamber cover with civil brick works, test link with 4 nos SS nut bolts , and proper marking on earthing cover shall be provided for body earthing	Nos	
3	SITC of 50mm x 6mm thick G.I. earthing strip from earthing chamber to the main power panel and it's termination. The portion of the strip underground shall be laid to a depth of at least 75cms. The portion on building wall upto the main panel shall be laid on cable trays or to be saddled to the wall as per the site conditions. GI flats to be painted with two coats of enamelled paint	mtrs	
4	SITC of 25 mm x 6mm thick G.I. earthing strip from the GI earthing grid inside the panel room to the body earth connections of the individual panels. GI flats to be painted with two coats of enamelled paint	mtr	
5	SITC of 25mm x 3 mm thick G.I. earthing strip from the GI earthing grid inside the panel room to the body earth connections of the individual panels. GI flats to be painted with two coats of enamelled paint	mtrs	
6	SITC of 50 mm x 3 mm thick Copper earthing strip for interconnecting the earth pits. The portion of the strip underground shall be laid to a depth of at least 600mm with PVC Sleeve. All joints shall have 2 nos nut bolts.	mtr	
6.1	SITC of 25 mm x 3 mm thick Copper earthing strip for interconnecting the earth pits. The portion of the strip underground shall be laid to a depth of at least 600mm with PVC Sleeve. All joints shall have 2 nos nut bolts.	mtr	
7	This item is inclusive of making necessary temporary arrangement lighting with fixtures to attain a minimum 200 Lux lighting level for area of 3000 Sqft Floor & provision of substantial number of power points for welders ,carpenters, electricians & others . The supply should be routed through MCB DB having ELCB of suitable rating. Cost of energy meter at main incoming to be considered (if required by client). Contractor to provide multiple DBs & services being multiple services. This item includes cost of supply & installations of main DB with energy meter, Small DBs at each levels, Its cabling, Temp wiring for Lighting fixtures & Power sockets. Lighting Fixtures, Power sockets, required hardware & associated material. Also vendor shall maintain the same till completion of project. All temp light material shall be removed and taken back by electrical contractor.	Job	
8	CEIG APPROVAL - Statutory approval from Local Electrical Inspectorate & other required statutory bodies for clearance from electricity authority / Electrical	Job	

	Inspectorate. Identification to be done for all electrical equipments like panel, DB, sockets, Light fittings, Cables, Etc. for entire Electrical installation of Building for 10000 Sqft .The job involves submission of application, test report & other relevant documents as may be required to EI & EB, follow up with EI & EB, collection of FQ, making necessary application payment to EI & EB (DD for the same shall be given by client), coordination with EI & EB project team & getting the relevant work done from EI & EB at site for obtaining power supply. This being a time bound job, the meter connection work should be carried out within the time frame mentioned in tender.(This is to be noted that this work include liasoning with EI & EB) & Electrical Inspector charges to approve entire Electrical installation Work .The job involves submission of drawings ,test report, arranging visit of electrical Inspector at site , Approval of Electrical Inspector on drawing Layout. This being a time bound job, Vendor should ensure that they should get permission of Electrical Inspector in time .This is to be noted that this work excludes liasoning with EI & EB.All official charges will be reimbursed by client.		
9	SITC of 1Cx 50 sq mm COPPER flexible cable for earth in PVC HMS Conduit inside the building premises PDU.	mtrs	
10	SITC of 1Cx 25 sq mm COPPER flexible cable for earth in PVC HMS Conduit inside the building premises.	mtrs	
11	SITC of 1Cx 16 sq mm COPPER flexible cable for earth in PVC HMS Conduit inside the building premises.	mtrs	
12	SITC of 1Cx 10 sq mm COPPER flexible cable for earth in PVC HMS Conduit for UPS BODY EARTH	mtrs	
13	SITC of 1Cx 6 sq mm COPPER flexible cable for earth along with the supply cable in 20mm PVC HMS Conduit .The rate shall include GI Conduit	mtrs	
14	SITC of 1C x 2.5 sq mm COPPER flexible cable with for earth along with brass clips for termination on MODULAR WORKSTATION METALIC BODY.	mtrs	
	Item no.8 to 14 The rate shall inclusive of Termination at Both Ends.		
15	Supply, installation, testing & commissioning of GI earth bus of size 50 mm x6mmx 600 mm (WxBxL) mounted on insulators, Directly on wall or channel or flooring as directed. Bus should have 10 nos of holes with GI nut bolts of suitable size	No	
16	Supply, installation, testing & commissioning of copper earth bus of size 25 mm x 3 mmx 600 mm (WxBxL) mounted on insulators ,in suitable size MS Powder Coated box (Acrylic to be provided on front cover to view termination). Bus should have 10 nos of holes with brass nut bolts of suitable size	No	
17	Supply & Installation of Metallic caution/Danger boards of voltage grade as given below with red colour base & white painted in English, Hindi & local		

	language. Grade Caution Boards. 150 x 150 mm size with 2 Hrs radium light		
	a. 415 V	No	
18	Supply & Installation of rubber mats of 1000 mm. width & thickness of 10mm		
	1.1 KV Voltage grade.	Mtrs	
19	Supply & Installation of shock treatment chart in English & local language. Shock treatment chart to be printed & glass framed.	No	
19.1	11KV Hand gloves	Nos	
20	Supply & Installation of first aid kit with wall mounting wooden stand.	No	
21	Supply & Installation of Co2 fire extinguishers for elect room, reception and cafeteria - 4.5KG with floor stand	No	
21.1	5 KG clean Agent Automatic ceiling suspended fire extinguisher with 68 deg sprinkler with stand	Nos	
22	Supply & Installation of ABC fire extinguishers for office area - 2 KG with floor stand	Nos	
23	SITC of portable Dry chemical type clean AGENT for IT Equipments, environment friendly fire Extinguisher of 2 Kg. Capacity of Fire extinguisher. For Server and Hub rooms. with floor stand	No	
23.1	10 KG sand buckets with wall mounting stand	Nos	
23.2	Fire extinguisher signage on wall and safety signages 200 x 200 mm size, with 2Hrs. radium	Nos	
23.3	Fire exit route map with Glass frame and fixing on wall	Nos	
24	SITC of Following sizes of Earthing bare conductor wires with clamps,/saddles /brass clips etc.		
a	8 SWG GI Wire for AC earthing and outdoor USE	mtrs	
b	12 SWG CU Wire for DB earthing and indoor USE	mtrs	
25	SITC of 1 KVA On line UPS for EM lighting	Nos.	
	Input voltage : Single Phase ,230V		
	Output voltage : Single Phase ,230V		
	Efficiency =92 % at full load PF -0.9		
	Maintenance seal lead acid battery with minimum 30 minutes battery back up at full load.		
	Bypass system - manual		
E	RACEWAYS & WIRING		

1	Floor preparation for raceway laying-Raceways / conduits shall be fixed to the flooring with GI clamps for finished levels as per the site conditions or through partitions with all accessories. The rate shall include preparation of trenches upto 450 mm wide by carefully removing the floor tiles / IPS & malwa below the tiles for laying Raceways/conduits . The depth of the trenches shall be at least 2 inches from the finished floor level or upto RCC of the slab. The rate shall also include the activity of clearing the debris generated at designated area by PM .(Breaking and back Filling the same with PCC 1:2:3 with metal wire mesh not part of electrical contractor scope. Contractor shall take prior permission before execution of this work wherever required)	RMT	
1.1.	Supply and laying Raceways / Conduits Raceways / conduits shall be fixed to the flooring with GI clamps for finished levels as per the site conditions or through partitions with all accessories. Raceway and JB shall be closed properly with plastic bags to avoid entering of cement mortar. All JB and raceway to be earthed at each contact point and at DB level with 16 SWG cu wire.		
a	100mm x 38mm Aluminium raceways, 1.6 mm thick	mtr	
a.1	82 mm x 38mm Aluminium raceways, 1.6 mm thick	mtr	
a.2	100 mm x 40mm Aluminium raceways, 1.6 mm thick	mtr	
b	25mm PVC conduits of wall thickness of 2 mm thick	mtr	
c	40mm HMS PVC conduits of wall thickness of 2 mm thick	mtr	
d	50mm HMS PVC conduits of wall thickness of 2 mm thick	mtr	
e	25mm Flexible PVC conduits of wall thickness of 1.6 mm with Gland	mtr	
2	Junction Boxes		
a	Supplying and fixing 350 mm x 350 mm x55mm deep GI finish. The junction boxes shall have knock-outs on all sides suitable for Raceways/conduits. With stainless steel Plate. The knock out shall be removed at site as per requirements. Junction boxes shall be levelled at the time of installation. Junction boxes shall be earthed with raceway with 18 Swg cu wire. Junction boxes and raceway shall be covered with plastic bags during back filling of concrete work.	Nos	
b	Supplying and fixing 250 mm x 250 mm x55mm deep GI finish. The junction boxes shall have knock-outs on all sides suitable for Raceways/conduits. With stainless steel Plate. The knock out shall be removed at site as per requirements. Junction boxes shall be levelled at the time of installation. Junction boxes shall be earthed with raceway with 18 Swg cu wire. Junction boxes and raceway shall be covered with plastic bags during back filling of concrete work.	Nos	
c	Supplying and fixing 150 mm x 150 mm x55mm deep GI finish. The junction boxes shall have knock-outs on all sides suitable for Raceways/conduits. With stainless steel Plate. The knock out shall be removed at site as per requirements. Junction boxes shall be levelled at the time of installation. Junctions boxes shall be earthed with raceway with 18 Swg cu wire. Junction boxes and raceway shall be covered with plastic bags during back filling of	Nos	

	concrete work.		
3	Supply & installations of MS Powder coated sheet steel, Raceways in red or blue in colour made of 1.6 mm thk, with removable top cover & knock outs of 25dia mm at every 300mm for entry/exits of cables , complete with couplers, bends etc. The raceway shall be fixed to the flooring with 40 x 40 mm x 4mm GI angle bracket with required hard ware such as anchor fasteners threaded rods, clamps etc. This management should be sufficient enough to cater the fixing & removal force of 32amps IP 44 socket. Additional support for each socket to be considered in the rate.. The brackets/Straps shall be spaced at 500mm apart & on either sides of bends.(TO BE USED ONLY FOR THE NETWORK ROOM & HUB Room & Server room)		
a	350mm wide x 50 mm ht 1.6 MM Thick with cover	mtr	
b	200 mm wide x 50 mm ht 1.6 MM Thick with cover	mtr	
c	100mm wide x 50mm ht 1.6 MM Thick with cover	mtr	
d	300 x 75 MM GI perforated tray for data cable below false floor	Mtrs	
4	Supply & installations of Stainless steel Basket Type open Cable trays 400 mm x100 mm, in LAB/NER Room, made of 6.0mm dia stainless steel rods , with 100mm grid , bends, SS welding , Fixing Supports , all installation accessories etc. The rate to include fixing MS PAINTED SUPPORT bracket of 50 mm x 6.0mm Make : LEGRAND CABLOFIL	mtr	
5	SITC of High end Switch sockets for lighting SB and 5/15A Raw points in cabin and conf room, basic cost taken for plate switch sockets combine taken rs. 3000 per room	Set	
F	LIGHT FITTINGS & FIXTURES		
A	Supply, Installation, Testing & Commissioning of the following fixtures complete with all tubes, lamps, HF electronic ballast with THD less than 10%, , fixing arrangements ball and sockets and suspension conduits connections, earthing complete with all hardware, clamps, etc as per specification & as per architects approved colour temperature. All fittings shall be suitable for dimming		
1	Supply, Installation, Testing & Commissioning of 600x 600 mm recess mounted , 30-34 W (system wattage)LED light , with full diffuser 84% transference 6000k color temp and CRI >80%. The fitting shall be fixed with chain ,screws etc. The fitting shall be recessed mounted suitable for gypsum Ceiling, with full acrylic diffuser and delivered lumens 95 lumen> per watts, The rate shall include connection with 3 core 1.5 sqmm. flexible copper cable with Flexible Conduit. The brief specification of Fixture is as under: LED chip used. Cost to include linking metal strips, wires, connectors, and hardware material. Vendor shall order end light fitting in each row is per site requirement(light shall give avg 300- 350 lux on workstation)	Nos	
2	Supply, Installation, Testing & Commissioning 15- w LED down light with heat sink on backside . For passage (light shall give avg 150- 200 lux on Passage and 300 Lux on workstations)	Nos	

3	Supply, Installation, Testing & Commissioning 18- 22 w LED down light with heat sink on backside . For passage (light shall give avg 150- 200 lux on Passage and 300 Lux on workstations)	Nos	
4	3W spot lights	Nos	
5	Supply Installation of EXIT Signage's with LED lamp with 90 minutes battery backup type & LED lamps as per NFPA standard. These signages may be mounted on wall OR can be fixed on ceiling with gear wire /recessed.	Nos	
6	30W- 50mm x 1200 mm recess liner light as per architect requirements - basic price 4000	Nos	
7	20 W Decorative suspended light as per architect requirements - basic price 5500	Nos	
8	Day light sensor- with Timmer and adjustable lux level	Nos	
9	Occupancy IR sensors with timmer control	Nos	
10	10W per Meter LED strip lights with driver- cove light	Mtrs	
11	28 W LED TUBE lights - 4 feet with transparent cover housing for ware house	Nos	
12	Dimmable ballast for Led lights - Day light dimming	Nos	
13	Wall mounted industrial fans for warehouse and stores	Nos	
14	IP 67 outdoor flood lights - wall mounted , - 100W	Nos	
G	NVR Based CCTV Camera		
	IP CCTV system with 30 days recording- Honeywell or higher model		
1	SITC of IP based dome camera equipped with a 1/3" 2 MP progressive scan CMOS imager to capture 2304x1296 (20 fps)/Full HD 1080p (25/30 fps) images; a 3.6mm mm fixed lens; and a waterproof (IP66) enclosure, true day/night solution, camera shall use Smart IR technology and provide up to 100 ft (30 m) of IR illumination, 12 V DC power input.	Nos.	
2	8 Chanel Network switch	Nos	
3	SITC CAT 6 Cable in MS conduits with IO and faceplate , back box. AVG cable length 40RMT with conduits and all accessories	Nos	
4	SITC Flat screen TFT 32" high resolution Monitor with power supply complete with key board & mouse.	No.	

5	SITC of 8 CH NVR, 2 SATA HDD Slot (Max 32TB), ATX Power,Realtime Recording Resolution (16 Channels @2MP),Realtime Local Playback,Multiplex Operation,H.264 High profile,BNC/VGA/HDMI output, main profile, baseline,HDD Redundancy,Free DDNS,Network backup, USB HDD, USB writer, SATA writer,1 RS485, support 18 kinds of PTZ protocols,ONVIF 2.0,1 channel Audio Input and Output,16 Ch Alarm Input and 8 Ch Alarm Output- Free software supply and installation . 2 SATA HDD slots NVR shall be network compatible and remote access shall be available through IP Approved Makes:- Honeywell or higher model	No.	
6	4TB HDD drive with cables	Nos	
7	15 MTRS HDMI cable	Nos.	
8	12 U RACK FOR CCTV SYSTEM	Nos	
H	Access control system		
	Note- All Devices supply and installation in client scope		
1	Supply, installation, testing & commissioning of Bio metric-Finger print + card number readers (ESSL F8) as per specification suitable for mounting on Gypsum/metal surface/metal frames or wooden frames/ wall or as required based on site conditions including all accessories and civil works. Honeywell or higher model	Nos	
2	Supply, installation, testing & commissioning of Proximity card readers as per specification suitable for mounting on Gypsum/metal surface/metal frames or wooden frames/ wall or as required based on site conditions including all accessories and civil works.	Nos	
3	Supply, installation, testing and commissioning of electromagnetic Lock (fail safe type) of 600lb holding force, with Door Feedback & door ajar alarm buzzer for the following type doors : Locks shall be suitable for Glass door with U clamps		
a	Double leaf Door	Nos	
b	Single leaf Door	Nos	
c	magnetic contacts	nos	
4	SITC of 2 door controller with TCP/IP connectivity, & power supply unit with battery back up	Nos	
5	SITC of 4 door controller with TCP/IP connectivity, & power supply unit Make- Spectra, Solus, Honeywell Note- Access door shall open during fire alarm. Panel shall give door open alarm	Nos	
6	SITC of Access PC Hardware & Software		
6a	I5 Processor with mobo,8GB dd3 Kingston RAM ,Keyboard & Mouse, Cabinet circule,CD Drive with Dell screen 18.5" 1 TB HDD with windows installed	Nos	
6b	BASIC Multiple User licensed time attendance soft ware	Nos	

	Capability to map multiple companies within the Enterprise, and Various departments within a Company. Vendor to understand the existing software and provide the similar of higher version.		
	Should have capability for generating extensive customised reports.		
7	SITC of Armored Copper flexible Cable, PVC insulated, shielded PVC Sheathed cable. The cable shall be laid on surface with GI saddle-spacers every 0.3 meters. Complete with GI Junction Box, lugs, cable compression glands, cable tags and Ferruling.		
A	CAT 6 Cables in MS conduits	Mtrs	
b	4c x 0.75 Sq.mm for locks and exit switch with MS conduit	Mtrs	
8	Supply, installation, testing and commissioning of Proximity cards as per client specification. 32 bit/ 64 bits	Nos	
9	Supply , installation, testing and commissioning of Push Button for Exit- SS plate type	Nos	
10	24 Port Jack panels - loaded type	Nos	
11	Panic bar with battery operated alarm- 60DB alarm shall be considered , Vendor to include door contacts, hooter, and cabling	Nos	
I	FIRE ALARM SYSTEM		
	Note- Vendor shall include cost of integration with BMS, Access, PA and Elect system. All cables and hardware required for the same.		
1	Supply of 2 Loop Microprocessor based 2 wire fault tolerant loop, required loop networkable type (each loop accessing minimum 50 detectors /50 modules) fire alarm/detection control panel. The panel shall be able to give location of all fire/fault conditions of addressable units via the address codes. Further, the panel must be able to automatically switch ON /OFF respective control module whenever any alarm is triggered. The panel shall have rectifier, Loop cards, 80 character L C D unit to indicate Fire/Fault Signal with address and analogy output, external/inbuilt printer to log all fire or fault events complete in all respects. The Panel Shall be Sheet Steel Painted, sealed to IP30. The Panel Shall have 20 Zones with Individual LED Indicators, expandable to 80 LED Indicators. The Panel Shall have 3 Serial Ports. The panel shall have provision to integrate with PA System and shall have provision to connect to Building Management system through Modbus Card. The panel shall have a built in power supply and battery charger along with maintenance free 24 AH, 2 x 12 volt SMF Lead acid batteries capable of running for a minimum of 24 hours with battery charger complete as required. and conforming to BS5839 Standards and Duly Approved by EN54/LPCB as per specifications. Approved Makes: - Honeywell / Edward compatible - Note- Fire panel shall be integrated to Elect panel, Access control, Builder fire panel, Auto dialer, PA system. Vendor shall include scope for supply and installation for the same. PANEL SHALL BE NETWORK Compatible	No	
	2 Loop Panel with 120 Character Display, programmed as a node on a peer to		

	peer network with other Panels.		
2	Addressable fire alarm Active Repeater Panel which consists of display board which will have 160 Character Display with Touch key pad, Mother board UL Listed, Make: Honeywell / Edward compatible	Nos	
3	SITC of Addressable Smoke detector with base with Binary coded address setting. Dual LED's for 360° visibility. Sleek low-profile housing design. Regular 100mm (Below false ceiling) base. IP Rating : IP - 42. Approval: UL Listed, Make Honeywell / Edward compatible	Nos	
4	SITC Addressable Smoke detector with base with Binary coded address setting. Dual LED's for 360° visibility. Polarity free, Sleek low-profile housing design. Regular 100mm base(Above False ceiling with MS back box) . IP Rating : IP - 42. Approval: UL Listed, Make:Honeywell / Edward compatible	Nos	
4.1	SITC Addressable MCD detectors with base with Binary coded address setting. Dual LED's for 360° visibility. Polarity free, Sleek low-profile housing design. Regular 100mm base(Below False ceiling) . IP Rating : IP - 42. Approval: Honeywell / Edward compatible	Nos	
5	SITC of Analogue Addressable Heat detector Rate of Rise Cum Fixed Supply of Addressable Heat detector with base with Binary coded address setting. Dual LED's for 360° visibility. Sleek low-profile housing design. Regular 100mm base. IP Rating : IP - 42. Approval: (Below False Floor.) UL Listed, Make: Honeywell / Edward compatible	Nos	
6	SITC Addressable Manual Pull Station - Single Action - Honeywell / Edward compatible	Nos	
7	SITC of Addressable Monitor Module/ control module- Approval: Honeywell / Edward compatible	Nos	
8	SITC Addressable Relay Module. Approval: UL Listed, Make Honeywell / Edward compatible	Nos	
9	SITC Sounder / Hooter with Strobe with minimum Db level of 90db at 10 feet height with required control module Honeywell / Edward compatible	Nos	
10	SITC of Addressable Control Module for conventional sounder . Binary Coding Setting - Approval: UL Listed, Make-Honeywell Morley/Notifier/Siemens	Nos	
11	Supply of Fault Isolator with base Honeywell / Edward compatible	Nos	

12	SITC of Response Indicator having twin LED flush mounted on false ceiling/wall	Nos	
13	SITC of 2 Core x 1.5 mm ² , Multi stranded AT Copper, FRLS Armoured cable, RED in Colour. The cable shall be laid on surface with GI saddle-spacers every 0.3 meters. Complete with GI Junction Box, lugs, cable glands, cable tags and Ferruling as required. Make polycab or Equivalent	Mtr.	
14	SITC of GSM Auto dialler system, shall be capable of sending SMS and call alert to max 10 peoples Note: GSM sim Card in customer scope	no	
J	PA SYSTEM		
	Note- Vendor shall include cost of integration with BMS, Access, PA and Elect system. All cables and hardware required for the same.		
1	SITC of Dual Tone Ceiling mounted speaker with all requisite mounting accessories to mount the speaker on False Ceiling / True Ceiling.		
1.a	6 Watts-	Nos	
1.b	Box type IP 66 12 watt speaker wall mounted type suitable for Open ware house area	Nos	
2	SITC of 8 Zone Voice Alarm controller/ Preamplifier/ Mixer amplifier Auto fire evacuation message with USB MP3 AM FM CAT 6 connectivity for Mic with	Nos	
3	SITC of Power Amplifier 250 W	Nos	
3.1	SITC of Power Amplifier 175 W within built mic and Preamplifier/ Mixer Make-Honeywell/ Bosch	Nos	
4	SITC of Background music source CD/DVD/ AM-FM Tuner (BGM Source) . Sony/ Phillips	Nos	
5	SITC of Call Station With 6 Zone Selection Switch with wired mic with cat 6 cable connectivity	Nos	
6	SITC of 6W Volume Control, with ON/OFF with auto over ride option	Nos	
6.1	2 Nos mics with cable direct from amplifier in BMS room	Nos	
7	SITC of ISI Marked FRLS Armoured 2 core x 1.5 mm ² , Multi stranded Copper Conductor, PVC sheathed Cable with The cable shall be laid on surface with GI saddle-spacers every 0.3 meters. Complete with GI Junction Box, lugs, cable glands, cable tags and Ferruling. Make	Mtrs	

C. HVAC Works

The bidder will design, supply and carry out HVAC works for accommodating functional areas like Data Center area and Electrical Room for the proposed Data Center.

Sr. No.	Scope of Work - HVAC	Unit	Qty
A	AC MACHINE & PIPING WORK (with 100% redundancy system (N+N)).		
1	CONVENTIONAL SYSTEM		
	Supply, Installation Testing & Commissioning of Air cooled conventional Ductable split units with high static pressure, make : Daikin / Mitsubishi / Toshiba / Hitachi / OG.		
	Ductable split type conditioning units, each comprising of an outdoor and a single/double indoor unit/s. Condensing unit shall be complete with hermetically sealed rotary / scroll compressor/s, with aluminium fins, thermostatic expansion valve and air cooled condenser with fan. Evaporating unit shall consist of a fan section with dynamically balanced centrifugal fan/s driven by FHP/TEFC squirrel cage induction motor, multi rows deep cooling coil of copper tubes and aluminium fins etc. Enclosures shall be fabricated as specified. The evaporating unit shall be equipped with synthetic fibre filters, insulated drain pan, safety controls, thermostat all complete in a unit. The outdoor unit enclosure shall be factory painted to a smooth finish. Ductable three phase units shall be complete with phase reversal kit and motor protection device. Including lifting, shifting, fabrication, installation of MS base platform for indoor/outdoor unit complete with epoxy painting, vibration isolation pads, support hangars, railing, brackets etc. Canvass connections with zip as approved by consultants. This also shall include complete testing & commissioning. The quoted price shall be inclusive of full charge of refrigerant gas.		
	Three phase ductable split units :		
1.1	3 TR Ceiling suspended Ductable split units with single circuit	Nos.	
2	Copper Refrigerant Piping & Cabling for Air cooled ductable split units.		
	Supply, Installation, Testing and Commissioning of hard/soft copper refrigerant piping complete with fittings between indoor units and remote condensers. Refrigerant piping complete for all circuits with suction line insulation of min. 9 mm thick Armaflex make & electrical cabling & conduiting with proper supporting arrangement @ every 4 feet...		
2.1	3.0 TR Ceiling suspended Ductable split units		
2.1.1	Refrigerant piping (Circuit Length)	Rmt.	
2.1.2	FRLS Power cabling	Rmt.	
2.1.3	FRLS Control cabling	Rmt.	
2.1.4	Isolator switch of IP-55 construction near outdoor/indoor unit	Nos.	

	Note for packaged units : If the Ref.piping lengths of each odu are beyond 20 M, vendors are supposed to consider one size bigger than the prescribed sizes of Ref.pipes & quote accordingly for the same.		
3	Provision of oil separator & accumulator for each circuit to cater additional refrigerant piping length. (applicable for more than 25 mtr running ref. piping)	Nos.	
4	AIR COOLED CONVENTIONAL TYPE HI-WALL SPLIT UNITS		
	Supply, Installation, Testing & Commissioning of Ductable / split type air-conditioning units, each comprising of an outdoor and single/double indoor unit. Condensing unit shall be complete with scroll / Rotary compressor/s & air cooled condenser with fan. Evaporating unit shall consist of a fan section with dynamically balanced centrifugal fans driven by FHP motor, multirows deep cooling coil of Copper tubes and aluminium fins, thermostatic expansion valves etc. Additional treatment for corrosion protection approx. coating shall be included. MS fabrication platform works for outdoor units. The evaporating unit shall be equipped with synthetic fibre filters, insulated drain pan, safety controls, thermostat all complete in a unit. The enclosure shall be factory painted to a smooth finish. The quoted price shall be inclusive of full charge of refrigerant gas, vibration isolation pads & Flexible ducts at ductable units outlet.		
	Make : Daikin / Mitsubishi / Toshiba / Hitachi / OG.		
	Hi-Wall Split Units		
4.1	2.0 TR / 700 CFM	Nos.	
4.2	1.0 TR / 380 CFM	Nos.	
	REFRIGERANT PIPING & CABLING FOR HI WALL SPLIT UNITS		
	Supply, Installation, Testing and Commissioning of hard/soft copper refrigerant piping complete with fittings between indoor units and remote condensers. Refrigerant piping complete for all circuits with suction & liquid line insulation of min. 9mm thick Class "O" Armacell make Insulation & electrical cabling & conduiting with proper supporting arrangement @ every 4 feet..		
4.3	2.0 TR High-wall		
4.3.1.	Refrigerant piping (Circuit length for Liquid & gas)	Rmt.	
4.3.2	FRLS Power cabling	Rmt.	
4.3.3	FRLS Control cabling	Rmt.	
4.3.4	Isolator switch of IP-55 construction near indoor/outdoor unit	Nos.	
4.4	1.0 TR High-wall		
4.4.1	Refrigerant piping (Circuit length for Liquid & gas)	Rmt.	
4.4.2	FRLS Power cabling	Rmt.	
4.4.3	FRLS Control cabling	Rmt.	
4.4.4	Isolator switch of IP-55 construction near indoor/outdoor unit	Nos.	
5	Drain Piping Make : Supreme / Prince		
5.1	Drain Piping shall be Hard PVC.32mm dia for single unit, 40mm dia for two units and 50mm dia for 3 units. Drain Piping shall be insulated with 12mm Armaflex.	Rmt	
5.2	Epson Drain Pumps for above Hi-wall Units (If slope not available)	Nos.	
6	SEQUENTIAL TIMER CONTROLLER		

	Supply & installation of Auto sequential control panel for the DX Units. The panel should have the following features. A/C units shall be able to restart automatically after power failure/interruption. Automatic fault changeover Sequential changeover of operating units every 8 or 12 hours or as per Client schedule. Switch over to next machine or start both/all units if temperature exceeds the set point. The panel should be provided with potential free contact for fire integration. Should generate an alarm if the unit trips or the room temperature goes beyond the set point. Necessary control / power cables required. Complete with Temperature sensors		
6.1	For 3 nos 1.0 TR Hi-Wall Split units (2 Working + 1 Standby)	Set	
6.2	For 2 nos 2.0 TR Hi-Wall Split units (1 Working + 1 Standby)	Set	
	SUB TOTAL A		
B	Ducting & Insulation		
1	SHEET METAL DUCTING & INSULATION		
1.1	Rectangular ducting – Factory Fabricated complete with splitter dampers, turning vanes, access doors, supports, air tight joints applied with sealant etc. as per drawings (Rolastar / Zeco / SA Enterprises / Nutech / DBS Make) (Make for GI Sheet :- Jindal / Sail)		
1.1.1	Thickness 0.63 mm sheet (24 G) -	Sqm	
1.1.2	Thickness 0.80 mm sheet (22 G)	Sqm	
1.1.3	Thickness 1.00 mm sheet (20 G) - For plenum	Sqm	
1.1.4	Thickness 1.25 mm sheet (18 G) -	Sqm	
2	DUCT ACOUSTIC INSULATION		
2.1	Acoustic Insulation with 13 mm thick self-adhesive nitrile rubber (arma sound) as shown in the drawing (Arma Cell / K Flex / Equivalent. Make.)	sq.m	
3	DUCT THERMAL INSULATION		
3.1	Thermal Insulation with self-adhesive 13 mm thick nitrile rubber & all joints of the insulation shall be further covered with 50mm wide 3mm thick self-adhesive tape made of similar material of (Armacell / K flex / Equivalent. Make.)	sq.m	
	SUB TOTAL B		
C	Air Distribution Works		
1	Supply & Installation of Supply air / Return air Aluminium extruded Powder Coated 2 slot Grille of sizes 100 mm with end flanges . (Make : Cosmos / Dynacraft / System Air / Air Product / Equivalent.)	Rmt	
2	Supply & installation of Insulated flexible duct with Jubilee clips & aluminium foil tapes Make: Cosmic / Seven Star / Equivalent.		
2.1	100 mm dia	Rmt.	

3	Supply Installation Testing and Commissioning of Opposed blade dampers black powder coated vertical blade type for supply air collar. The damper should be gear operated type.	sq.m	
4	Volume Control Dampers made out of 100 x 40 x 1.55 mm thick galvanized steel frame and with opposed blades of 1.55 mm galvanized sheet steel. (Make : Sachin Impex / Dynacraft / Komalco Systems / Air Product)	sq.m	
5	Supply, Installation of Fresh air intake / exhaust outlet connections with rain protection louvers, bird screen (Al. 26 G min.) & volume control damper gear operated type. Make : Cosmos / Air Products / Equivalent.	sq.m	

Approved Make List

LIST OF APPROVED MAKES			
Sr	ITEM DESCRIPTION	LIST OF MAKES	Quoted by Contractor
1	PVC FRLS CONDUITS & ACCESSORIES	PRECISION ,VIP	
2	G.I/ MS .CONDUITS ISI MARK	BEC, AKG	
3	FRLS WIRES: 1100V/660V GRADE	POLYCAB, KEI, RR	
4	1.1KV LT FRLS CABLES	POLYCAB, KEI, RR	
5	CABLE GLANDS & LUGS	BRACO, DOWELLS,COMET	
6	DISTRIBUTION BOARDS, MCB's	LEGRAND , ABB, SCHNEIDER	
7	ELCB/RCCB/RCBO - 30mA,100mA,300mA.	LEGRAND , ABB, SCHNEIDER	
8	ELETRICAL FITTINGS	PHILIPS, LIGHTING TECHNOLOGIES, Wipro, Aray storm	

9	Dimmable balast	PHILIPS, OSRAM, WIPRO	
10	FANS AND EXHAUST FANS	CROMPTONS, GEC, USHA	
11	6A / 16A MODULAR SWITCHES & SOCKETS, ISI MARK	Schneider, RR ,Legrand,	
12	INDUSTRIAL SOCKETS	LEGRAND,SCHNEIDER, MENEKES	
13	G.I. B-CLASS PIPES (ISI)	ITC, PRAKASH,TATA	
14	TELEPHONE WIRES	DELTON, RR, POLYCAB	
15	HRC SWITCH FUSE UNITS	L&T, SIEMENS, ABB, SCHNEIDER (MERLIN GERIN)	
16	CONTACTORS	L & T, SCHNEIDER (MERLIN GERIN), LEGRAND	
17	ACB / MCCB	SCHNEIDER (MERLIN GERIN), L & T,ABB,	
18	C.T	INDCOIL, MECO,AE	
19	CAPACITOR	SUBODHAN,EPCOS, VIJAY	
20	P.F. RELAY	TRINITY, ENERCON, SECURE, L&T	
21	ALUMINIUM RACEWAYS	JINDAL/BHANSALI/MAH EXTRUSION	
22	MANUAL CHANGE OVER SWITCH	L & T,SCHNEIDER (MERLIN GERIN),SOCOMEK	
23	RG59 OUTLETS	M.K.INDIA, CLIPSAL	

24	RG59 COAXIAL CABLE	FINOLEX, POLYCAB, RR	
25	RACEWAYS / CABLE TRAYS	PROFAB,ASIAN,LEGRAND	
26	PANEL ACCESSORIES	L&T, SIEMENS, MG,GE	
27	LOAD MANAGERS / MEASURING INSTRUMENT	ENERCON,SCHNEIDER,CONZERV	
28	GI PIPES	TATA, JINDAL, PRAKASH	
29	BUS DUCT TRUNKING	Schneider , ABB, RR	
30	ATS	Emerson, ASCO, socomech	
31	SPD	LEGRAND,SCHNEIDER (MERLIN GERIN),HAGER	
32	LT POWER PANELS AND CAPACITOR BANKS	Arrow Engg — MUMBAI	
		Zenith Engg- Mumbai	
		sv power systems - mumbai	
		CPRI Approved equivalent panel manufacturer	
33	LED TYPE INDICATING LAMPS	TECKNICS/L&T/GE/SIEMENS	
34	COMPACT SUBSTATION	ABB, SCHNEIDER, SIEMENSE	
35	HT SWITCHGEAR AND RMU	ABB, SCHNEIDER, SIEMENSE	
36	HT CABLE JOINTING KIT	RECHEM,JAINSON	

37	UPS SYSTEM and static switch	Schneider, Socomec, EMERSON,ETON	
38	DG SYSTEM	CATERPILLER, CUMMINS,SG	
39	EMERGENCY LIGHT INVERTER	MEGATECH, PROLITE, DUBASH	
40	PA/ MUSIC SYSTEM & SPEAKERS	BOSCH,AHUJA, Honeywell	
41	FIRE SYSTEM	Siemens, Honeywell, Notifire	
42	RODENT REPELLANT SYSTEM	MASER,RCAT, STAR	
43	ACCESS CONTROL	Honeywell, SPECTRA	
44	CCTV SYSTEM	HONEYWELL, PANASONIC, SONY	
45	IBMS SYSTEM AND SOFTWARE	HONEYWELL, SIEMENSE, SCHNEIDER	
46	Fire Extinguisher	Cease fire, Safex, MINIMAX	
NOTE- Contractor should take prior approval for any changes in makes or technical specification from Client and Consultant. Client has all rights to change the makes and specifications as per requirements of site			

PART C – NETWORKING SWITCHES

The Bank's current Core IT Network is deployed using CISCO Network devices. The proposed solution should be compatible with the existing setup.

Core Switch Technical Specifications

Technical Specifications	Compliance (Y/N)
OEM Capabilities	
The OEM suggested should be a part of the Leaders quadrant of 2019 Gartner (Report) Magic Quadrant for Data Center Networking	
Switch Hardware features and performance	
Switch should have minimum 48* 1/10G SFP and 12* 40G uplink ports	
Switch should have minimum switching capacity of 4.8Tbps	
Switch should have minimum throughput of 1.8 Bpps	
Switch should have max 2RU form factor	
Switch should have minimum packet buffer size of 16MB	
Switch should support Hot swappable redundant power supply and Fans	
Layer-2 Specifications	
Should support 802.1Q based 3000 VLAN's (Minimum)	
Should support spanning tree protocols such as RSTP, MSTP	
Should support static and dynamic VxLAN	
Should support IGMP protocol	
Layer-3 Specifications	
Switch should support policy based routing	
Switch should support Equal cost multipath	
Switch should support IPv4 routing protocols static routes, RIP, RIPv2, OSPF, BGP	
Switch should support static route, RIP, OSPF and BGP for IPv6	
High Availability	
Switch should have mechanism which can combine two switches in single virtual switch with separate data plane, control plane but single management plane.	
Switch should support VRRP protocol	
Switch should support hot swappable redundant power supply	
Switch should provide hitless failover during upgrades	
Quality of Service	
Switch should support Strict priority queuing, weighted round robin	
Switch should support 802.1p standard	
Manageability	

Switch should support SNMPv1,v2 and v3 protocols	
Should support sFlow	
Switch should support Local and remote port mirroring i.e. RSPAN, ERSPAN	
Switch should support RMON capability	
Security	
Switch should support Radius and TACACS+ protocols	
Switch should support IEEE 802.1x based authentication	
Should support ACL that can filter packet based on Layer-2 to Layer-4 fields	
Should support protocols such as RA guard and ND snooping	

TOR Switch Technical Specifications

Technical Specifications	Compliance (Y/N)
OEM Capabilities	
The OEM suggested should be a part of the Leaders quadrant of 2019 Gartner (Report) Magic Quadrant for Data centre Networking	
Switch Hardware features and performance	
Switch should have minimum 48 * 1/10G Base-T ports and 6* 40G ports	
Switch should have minimum switching capacity up to 1.4Tbps	
Switch should support Hot swappable redundant power supply	
Switch should have packet buffer size of minimum 12MB and	
Switch should provide upto 3 microsecond latency for 10GbE	
Switch should have 1RU form factor	
Layer-2 Switching	
Should support 802.1Q based 4094 VLAN's	
Switch should support congestion management technologies such as IEEE 802.3x	
Switch should support IGMP snooping v1/v2/v3, PIM snooping, MLD snooping v1/v2/v3 and IPv6 PIM snooping	
Switch should provide full DHCP snooping functionality	
Layer-3 Specifications	
Should support connectivity fault management i.e IEEE 802.1AG that can be used for fast fault detection and recovery	
Should support VxLAN L2 and L3 gateway feature and support up to 2K tunnels	
Should support ECMP	
Should support static routes, RIP, OSPF and BGP	
Should support static , OSPFv3 and BGP for IPv6	

Should have mechanism to reduce convergence time for routing protocols such as BFD or equivalent	
High Availability	
Switch should support technology by which multiple switches acts as single virtual switch with single IP for management for TOR or spine/leaf deployment	
Should support minimum 8 switches in single virtual stack	
Should support patch installation and new services features installation without rebooting the equipment	
Switch should support hitless software upgrade in high availability	
Data Center features	
Switch should support reversible Airflow mechanism	
Switch should support Jumbo frames sizes up to 9,000 bytes	
Switch should support FCoE with FCF and N- port virtualization	
Switch should support Data Center Bridging protocols	
Quality Of Service	
Should support classification based on DSCP field, MAC address, IP protocol type, port number	
Should support Strict priority queuing, weighted round robin and weighted fair queuing	
Manageability	
Should support sFlow	
Should have separate out of band management port, console port	
Switch should support SNMPv1,v2 and v3 protocols	
Switch should support various DevOps tools such as Puppet,Chef,YANG	
Switch should support Local and remote port mirroring i.e. RSPAN, ERSPAN	
Security	
Switch should support Radius and TACACS+ protocols	
Switch should support IEEE 802.1x based authentication	
Should support ACL that can filter packet based on Layer-2 to Layer-4 fields	
Should support protocols such as RA guardr and ND snooping	

BILL OF MATERIAL

Core Switch		
Sr. no	Description	Quantity
1	48 SFP+ 12QSFP+ fixed Port with Redundant Power Supply with 8*5* next business day HW Replacement for 60 Months	2
2	SFP-10G-SR	20
3	SFP-1G-BaseT	30
4	QSFP+ LC	16
5	QSFP+ to QSFP+ Cable 5M	2
6	Fan Tray	10
7	Power Supply	4
8	Licenses and OS Software	2
9	Power Cords	4

ToR Switch		
Sr. no	Description	Quantity
1	48 1/10Base T 6QSFP+ with Redundant Power Supply with 8*5* next business day HW Replacement for 60 Months	8
2	Power Supply	16
3	Fan Tray	32
4	QSFP+ LC	16
5	Licenses and OS Software	8
6	Power Cords	16
7	40 G Supportable Fiber Patch Cord 20 Mtr	16
8	Network cables (ofc(lc to lc 40G supported),cat6a)	lumpsum

Submittals

The Tenderer is responsible for managing the entire project from commencement to the final handing over of the facility to EXIM Bank. The Tenderer is required to provide detailed architectural diagrams and other illustrations like conceptual architectural plan, civil work details, electrical layouts and network cabling design layouts, 3D view of data center etc., for the envisaged DC.

Submittals will be provided with the proposal and will include:

- Descriptions of equipment to be furnished
- System GA
- Detailed layouts w.r.t smart solutions positioning in the server room.
- Site Pre-requisites
- Size and weight of shipping units

1.1 Warranty

The system will be provided with 1 year warranty + 4 year AMC.

1.2 Quality Assurance

The specified system will be factory-tested before shipment. The system will be designed and manufactured according to world-class quality standards and will be factory tested before the shipment. The manufacturer will be ISO 9001 certified

1.3 Scope of Installation, Configuration and Integration

- Physical installation and deployment of an Integrated Modular Data Centre Infrastructure Solution to cater requirement as per current/additional critical hardware and Networking devices.
- Proper marking of cable, Safety Sign board/Route marker to be installed for cable aid underground and other miscellaneous work.
- Any structure, permanent or temporary, dismantled or destroyed during the execution of the work shall, will be refill/remake or restore to its previous condition by the bidder at its own cost.
- Any extra electrical points required in the server room shall have to be provided by the

network vendor at his own cost.

1.4 Scope of Acceptance testing and commissioning

- After installation and configuration of each subsystem, integrating various systems and providing various services, tests shall be conducted for system performance.
- Commissioning shall mean end-to-end commissioning of the Data Center on turnkey basis with testing of every subsystem. Test parameters, commitments etc. shall be submitted along with implementation plan, which is shall be approved by EXIM.
- In the event, the test parameters, commitments are not submitted or not accepted explicitly in writing/minutes by EXIM, the Test parameters, commitments etc. as decided by EXIM will be final and binding.
- Upon Self testing and Commissioning, the system shall be offered for inspection by EXIM.
- The successful Bidder, along with EXIM shall prepare an inspection and acceptance schedule with details of each activity.
- Scope of Documentation
 - a. Providing original manuals of all hardware items supplied.
 - b. Implementation plan, to be approved by EXIM before initializing the installation and configuration activity
 - c. Test parameters, commitments etc. for acceptance testing to be enclosed along with implementation plan.
 - d. Operator manual for shutdown/start of the active resources.
 - e. Drawings and specifications for equipment:
 - i. Capacity data
 - ii. Electrical data
 - iii. Electrical connection drawing
 - iv. Piping connection drawing
 - v. Bill of materials
 - vi. Product catalog sheets or equipment brochures

- vii. Product guide specifications
- viii. Installation information, including, but not limited to, weights and dimensions.
- ix. Information about terminal locations for power and control connections.
- x. Drawings for requested optional accessories.
- xi. Wiring diagrams (Lighting, Fire)
- xii. Installation manual
- xiii. Operation and maintenance manual
- xiv. Compliance statements

1.5 Scope of Services required during warranty and CMC period

The brief scope of services and obligations to be performed by the Tenderer

Notwithstanding to those mentioned in the periodic maintenance checklist/maintenance plan are the following.

- Quarterly checking and servicing the entire data center (Quarterly preventive maintenance)
- Attending to the service when called upon by the client within two hours.
- Repairing/overhauling the components of the equipment at site/in service station, including replacement of worn out parts when found necessary.
- Replenishing refrigerant required because of a leak in the system arising out of wear and tear.
- Lubricating the bearings of motor, pumps and fans, when found necessary.
- Replacing of damaged electrical parts before restarting the system after breakdown.
- Quarterly inspecting belts, adjusting of tension and replacing worn out belts.
- Check control system and devices for evidence of improper operation. Repair, adjust or replace components to ensure proper operation.
- Check for proper operation of the cooling coil. Clean, restore or replace as required.

- Check the motor contactor for pitting or other signs of damage. Repair or replace as needed.
- Check fan blades. Clean, repair or replace as needed.
- Check refrigerant system temperatures. If outside recommended levels, find cause, repair and adjust refrigerant to achieve optimal operating levels.
- Check the integrity of all panels on equipment. Replace fasteners as needed to ensure proper integrity and fit finish of equipment.
- Check drain pan, drain line and coil for biological growth. Clean as needed.
- Visually inspect areas of moisture accumulation for biological growth. If present, clean or disinfect as needed.
- Check compressor oil level and or pressure on refrigerant systems having oil level and or pressure measurement means. Repair, replace or adjust as needed to ensure proper control.
- Check for proper damper operation. Repair or replace as needed.
- Check temperature transmitters for accuracy.
- Visually inspect exposed duct work and external piping for insulation and vapor barrier for integrity. Correct as needed.
- Visually inspect internally lined duct work until the first turn or up to 20 ft into the supply plenum from air system for integrity, and if soiled or degraded, correct.
- Records are to be maintained for all the above tasks and submitted to clients as and when required.

1.6 Scope of Training

- Practical Training of the Electrical, Civil and IT staff of EXIM Bank should be given. The training should cover all the aspects of functioning, maintenance and monitoring of the Data Center.
- Course material for the above (one copy each per participant) to be provided

Evaluation of Bids

Bid Evaluation Process

The objective of the evaluation process is to evaluate the bids to select an effective and best fit consultant in a fair and transparent manner and the Bank would be guided by this in carrying out the evaluation of bids. The decision of the Bank shall be considered final.

For the purpose of the evaluation and selection of Bidder for the Data Center design and construction project, a two-staged evaluation process will be followed. If a Bidder does not meet the eligibility criteria, the Bidder will be disqualified. **For the Bidders who satisfy the eligibility criteria, the 'Technical Bids' will be opened on the date mentioned in RFP schedule and subsequently evaluated.** In order to be shortlisted for opening of Commercial bid, it is mandatory for a bidder to score a minimum cut-off marks which is 70 marks in Technical evaluation. The Bidder scoring the highest technical score will be ranked as T1. Bidders who do not achieve the cut-off score will be disqualified from the bidding process and their commercial bids will not be opened.

For any clarification with respect to the RFP document, the Bidder may send an email to the email ID mentioned in RFP before the date specified therein and/or during the pre-bid meeting. It may be noted that all queries, clarifications, questions, relating to this RFP, technical or otherwise, should be in writing only and should be to the designated email id as stated earlier.

Written requests for clarification submitted to the Bank by the specified date and time will be explained by the Bank or its representative in the pre-bid meeting. The Bank may call for any clarifications / additional particulars required, if any, on the eligibility criteria/technical / commercial bids submitted. The Bidder has to submit the clarifications / additional particulars in writing within two working days. The Bidder's offer may be disqualified, if the clarifications / additional particulars sought are not submitted within the specified date and time.

The Bank reserves the right to call for presentation/s, clarifications etc., from the Bidders based on the technical bids submitted by them. The bidders should be ready to make a presentation on the Technical Bid at a one-day email notice. The Bank also reserves the right to conduct Reference Sites at the Bidder's client sites. Based upon the final technical scoring, short listing would be made of the eligible Bidders for final commercial bidding.

While the technical score carries a weight of 70 percent, the commercial score carries a weight of 30 percent. The Techno-Commercial scores (70:30) will be arrived at for each shortlisted Bidder and the Bidder with the highest score will be declared as the successful Bidder.

Technical Evaluation Parameters:

The overall score for evaluating the Bidder would be 100 marks, out of which 70 marks is for the Technical evaluation and 30 marks is for Commercial bid:

Technical Evaluation	Commercial Bid	Overall Score
70	30	100

For Quality and Cost based Evaluation (QCBS), the following formula will be used for the evaluation of the bids. The scores will be calculated as:

Commercial score (CS) =	$\frac{C_{low}}{C} \times 30$
Technical score (TS) =	$T \times 0.7$
Final score (S)	$= CS + TS$

C_{low} - The lowest commercial bid. **C** - Commercial quote of the bidder.

T - The marks obtained by the bidder as per the technical evaluation.

The bidder achieving the highest overall score will be invited for negotiations for awarding the contract. In case of a tie where two or more bidders achieve the same highest overall score, the bidder with the higher technical score will be invited first for negotiations for awarding the contract.

The Bank's decision to adhere to evaluation methodology will be final and binding and no claims whatsoever in this respect will be entertained.

The Bank also reserves the right to re-issue / re-commence / cancel the Bid/ Annul Bid process. Any decision in this regard by the Bank shall be final, conclusive and binding on the Bidders.

INSTRUCTIONS TO BIDDERS

1.0 Location:

Export-Import Bank of India, 21st Floor, Centre One Building, World Trade Center, Cuffe Parade, Mumbai 400 005 and Regional Offices in pan India.

- a. Tenderers must get acquainted with the proposed work, specifications, conditions of contract and other conditions carefully before tendering. The Tenderer shall seek **clarifications up to March 03, 2020, 12.00 Hrs...** No request of any change in conditions shall be entertained after pre bid date of the tender.

2.0 Any printing or typographical errors /omission in tender document shall be referred to EXIM Bank and their interpretation regarding correction shall be final and binding on Service Provider.

3.0 Transfer of Tender Documents:

Transfer of tender documents purchased by one intending Bidder to another is not permitted.

4.0 Rates:

The EXIM Bank is not concerned with any rise or fall in the product prices during price validity period of 90 days from tender opening date.

5.0 **Payments:** The payment will be made as per below schedule:

Sr. No.	Milestone	Payment
1	Delivery of material at site – in 2 interim bills during the project implementation.	70%
2	After completion of Installation and handover.	25%
3	Retention amount for 12 months from handover date.	5%

Warranty will start from the date of project sign-off.

6.0 Signing of the contract:

- a) The successful Bidder may be required to execute a non-disclosure agreement (NDA) with Exim Bank within 30 days from the date of receipt of the notice of acceptance of tender. In the event of failure on the part of the successful Bidder to sign the agreement in the above- stipulated period, the EXIM Bank may cancel the order.

b) Until the Agreement is formally signed, the Work Order / Letter of Acceptance of Tender issued to the successful Bidder and accepted by him may be operative and binding on the EXIM Bank of India and the Service Provider.

7.0 On acceptance of the tender, the name of the accredited representatives of the Bidder who would be responsible for taking instructions from EXIM Bank shall be mentioned by the Bidder.

8.0 If so decided EXIM Bank reserves the right to appoint PMC (Project Management Consultant) or any other agency to get the quality of works checked, measurements recorded, including certification of bills etc.

9.0 The EXIM Bank has the right to reduce or increase the scope of work. The Bank may give 3 months' notice period for termination of contract if service is not satisfactory to the Bank.

10.0 Notices to local bodies:

The Bidder / Service Provider shall comply with and give all notices required under any law, rule, regulations or bye laws of parliament, state legislature or local authority relating to works.

I/We hereby declare that I/We have read and understood the above instructions for the guidance of the Bidders.

Sign:

Date:

Place

E-Tendering Process Compliance Statement

The following terms and conditions are deemed as accepted by you for participation in the bid event (Tender Ref: **EXIM/RFP/2019-20/080**)

1. The price once submitted cannot be changed.
2. Technical and other non-commercial queries (not impacting price) can be routed to the respective contact personnel of the EXIM Bank indicated in the tender document. Bidding process related queries could be addressed to M/s E-Procurement Technologies Ltd personnel indicated in the tender document.
3. Inability to bid due to glitch in telephone lines, Internet response issues, software or hardware hangs will not be the responsibility of M/s E-Procurement Technologies Ltd or the EXIM Bank. However, M/s E-Procurement Technologies Ltd, shall make every effort to ensure availability of technology resources to enable continuous bidding.
4. M/s E-Procurement Technologies Ltd does not take responsibility beyond the bid event. Order finalization and post order activities would be transacted directly between bidder and the EXIM bank.
5. Bids once made cannot be withdrawn or modified under any circumstances.
6. The EXIM Bank reserves the right to extend or reschedule or annul the e-tender process.
7. The bidders are advised to visit <https://eximbankindiatenders.procuretiger.com> for any corrigendum etc.

I / We have read, understood and agree to abide by the e-tendering process compliance statement.

Date: -

Organization Name: -

Designation: -

UNDERTAKING FROM THE BIDDER

To,
Mr. Dharmendra Sachan,
General Manager,
Export- Import Bank of India, 21st Floor, Centre One,
World Trade Centre,
Cuffe Parade, Mumbai 400 005

Dear Sirs,

Ref: Data centre Design and Construction for Export-Import Bank of India

Ref. No: **EXIM/RFP/2019-20/080**

I / we further agree to execute and complete the work within the time frame stipulated in the tender scope of document. I / we agree not to employ Sub-Service Providers without the prior approval of the EXIM Bank. I / We agree to pay Sales Tax, Works Contract Tax, Excise Tax, Octroi, LBT, VAT, GST, Duties, all Royalties and all other applicable taxes prevailing and be levied from time to time on such items for which the same are liable and the rates quoted by me/us are Exclusive of the same.

I / we understand that you are not bound to accept the lowest tender or bound to assign any reasons for rejecting our tender. We unconditionally agree Exim Bank's preconditions as stipulated in the tender documents and empanelment process.

I / We agree that in case of my/our failure to execute work in accordance with the specifications and instructions received from the Exim Bank, during the course of the work, Exim Bank reserves the right to terminate my contract.

Yours truly,

Seal and Signature of the Bidder/s not required since the document is digitally signed.

Place:

Date:

Name:

Designation:

Seal:

Self-Declaration for Compliance

(On Company Letterhead)

I < **Name**> working as < **Designation**> in < *M/s. Company Name* > hereby declare that I am entrusted with the responsibility of ensuring compliance with various laws applicable to the company in the Administration of business and affairs of the company.

After having examined and considered all relevant information and based on the information furnished by the concerned officers, I, do hereby certify that;

1. My company complied with all applicable laws, enactments, orders, rules, regulations and other statutory requirements of the Central Govt. Of India, State Govt. and other statutory and local authorities concerning the business and affairs of the company.
2. Paid all applicable statutory dues on due dates.
3. Maintain proper registers, records, documents and books and filed proper returns, forms and statements and furnished necessary particulars to the relevant authorities.
4. Not done or committed any act or entered into any transactions in violation of any statutory provisions.
5. My company shall strictly follow and complied to Export Import Bank of India's policies, procedures and security measures during contract period.
6. My company will produce all documents for verification process as per Exim Bank's requirement and various audit compliance.

Date:

Authorised Signatory Name:

Place:

Designation:

Company Seal:

Annexure-V**Eligibility Criteria of the Bidder**

Sr No	Eligibility require from bidder	Document Require to verify the Eligibility Criteria
1	Bidder must be a registered firm/company in India under Companies Act, 1956 and should have been in operation for at least 5 years as on date of RFP	Certificate of Incorporation & Commencement of Business (whichever applicable) should be submitted.
2	Bidder should not have been debarred / black-listed by any Bank / Govt. / Govt. agency / PSUs Bank(s) / Financial Institutions in India in the past as on RFP submission date.	An undertaking to this effect must be submitted on company letter head duly signed & stamped by authorized signatory.
3	The Bidder should have successfully completed min 3 data centre projects in last 3 year	Upload Purchase Order Copy
4	The Bidder should have valid ISO 27001	Upload Valid Certificates
5	The Bidder should have register office in Mumbai.	Upload registration Certificate
6	The Project Manager from bidder must be CDCS certified or Project Manager directly from OEM to be appointed.	Upload Valid Certificates
7	Authorized MAF from OEM (UPS system, Smart Rack and Network Switches) is compulsory by the bidder as per the format mentioned in Tender Document	Upload MAF duly signed & stamp from OEM.
8	Critical Component's for Integrated Server Racks system (Rack, Cooling and monitoring system) should be from single OEM for Seamless Integration & better Service Supports.	Upload OEM certificate about integrated solution

Technical Evaluation Criteria of the Bidder

Sr No	Technical Criteria require from bidder	Marks Allocated	Document Require to verify the Eligibility Criteria
1	The Bidder turnover in last three years i.e. 2016-17, 2017-18 and 2018-19. i.e. each year. >50 and <=75 Cr = 5 Marks >75 and <=100 Cr = 10 Marks >100 = 15 Marks	15	Copy of the audited balance sheet as well as a CA certificate mentioning the turnover for last three financial years from the auditor should be submitted.
2	Number of Data Centre Design /Construction Projects executed by the bidder in last 3 years <3 Projects - 0 marks 3 Projects – 30 marks 4 Projects – 40 marks >=5 Projects – 50 marks	50	Upload Purchase order copy
3	Proposed Technology details and Presentation by the bidder	10	Upload Project execution approach document.
4	ISO 9001 = 5 Marks ISO 9001 and ISO 27001 = 15 Marks	15	Upload valid certificates
5	% of compliance to “Optional” items mentioned in the Smart Rack feature as per PART – A of scope of work. <=35% = 2.5 Marks >35% and <=50% = 5 Marks >50% and <=75%= 7 Marks >=75% = 10 Marks	10	

Note: Min 70% marks are required to qualify for opening of price bid.

PRICE BID

SR.NO.	PACKAGE/SERVICES	Total Price in ₹ (Exclusive of all taxes)
	PART-A	
1	SMART RACKS & UPS	
	Total	
	PART-B	
2	CIVIL & INTERIORS	
3	HVAC	
4	ELECTRICAL & ALLIED WORKS	
	Total	
	PART-C	
5	NETWORK SWITCHES	
	Total	
GRAND TOTAL (A+B+C) (Exclusive of all taxes)		
-		
(1st and 2nd year CAMC cost shall be included in above cost)		
	PART D	
6	Third year CMC (Quote Separately)	
7	Fourth year CMC (Quote Separately)	
8	Fifth year CMC (Quote Separately)	
	Total	

Annexure-VIII

NON-DISCLOSURE AGREEMENT

This Agreement is made on the _____ day of _____ by and between _____, (a _____ incorporated under the _____) having its office at _____ (hereinafter referred to as “_____” or the “**Receiving Party**”, which expression unless repugnant to the context or meaning thereof be deemed to include its successors and assigns) of the **ONE PART**;

AND

Export-Import Bank of India, a corporation established under the Export-Import Bank of India Act, 1981 and having its Head Office at Floor 21, Centre One Building, World Trade Centre Complex, Cuffe Parade, Mumbai 400 005 and one of its Regional Office at _____ hereinafter referred “EXIM” or “**Disclosing Party**”) which expression unless repugnant to the context or meaning thereof be deemed to include its successors and assigns) of the **OTHER PART**.

_____ & EXIM are hereinafter collectively referred to as the “**Parties**” and individually as a “**Party**”.

WHEREAS

The Parties intend to engage in a business relationship which includes _____. In the course of such business relationship, it is anticipated that EXIM may disclose or deliver to _____ certain or some of its trade secrets, policies, technical and business information, pricing, financial analysis, customer names, customer list, customer data or any other confidential or proprietary information, for the purpose of _____ (hereinafter referred to as “**the Purpose**”).

NOW, THEREFORE, THIS AGREEMENT WITNESSETH AND IT IS HEREBY AGREED BY AND BETWEEN THE PARTIES HERETO AS FOLLOWS:

1. **Confidential information**: For the purposes of this Agreement, “Confidential Information” means any and all information or data that is proprietary to the Disclosing Party and not generally known to the public, whether in tangible or intangible form, in whatever medium provided by the Disclosing Party to the Receiving Party or its representative(s) in connection with the Purpose and the business transacted/to be transacted between the Parties. Confidential Information shall include any copy, abstract, sample, notes or module thereof.

The Receiving Party shall use the Confidential Information solely for and in connection with the Purpose.

Notwithstanding the foregoing, “Confidential Information” shall not include any information which the Receiving Party can show: (a) is now or subsequently becomes legally and publicly available without breach of this Agreement by the Receiving Party, (b) was rightfully in the possession of the Receiving Party without any obligation of confidentiality prior to receiving it from the Disclosing Party and can be shown by documentary evidence in support thereof, (c) was rightfully obtained by the Receiving Party from a source other than the Disclosing Party without any obligation of confidentiality and can be shown by documentary evidence in support thereof, (d) was developed by or for the Receiving Party independently and without reference to any Confidential Information and such independent development can be shown by documentary evidence, or (e) is disclosed pursuant to an order of a court or governmental agency as so required by such order, provided that the Receiving Party shall endeavour to, unless prohibited by law or regulation, promptly notify the Disclosing Party of such order and afford the Disclosing Party the opportunity to seek appropriate protective order relating to such disclosure.

2. **Non-disclosure**: The Receiving Party shall not commercially use or disclose any Confidential Information to any other person or entity other than persons in the direct employment of the Receiving Party who have a need to have access to and knowledge of the Confidential Information solely for the Purpose authorized above. The Receiving Party may with prior written permission of the Disclosing Party, disclose the Confidential Information to its affiliates, consultants, advisors and such other persons who have a need to have access to and knowledge of the Confidential Information solely for the Purpose authorized above, subject to their entering into an agreement containing terms and conditions no less restrictive than as set out in this Agreement. The Receiving Party agrees to notify the Disclosing Party immediately if it learns

of any use or disclosure of the Disclosing Party's Confidential Information in violation of the terms of this Agreement. The Receiving Party undertakes to take full responsibility for the Confidential Information given to their Consultants, Advisors, Affiliates and other persons referred in above and consequently any breach by such Consultants, Advisors Affiliates and other persons referred in above shall be treated as breach by the Receiving Party and accordingly will be liable to the Disclosing Party.

3. **Publications:** Neither Party shall make news releases, public announcements, give interviews, issue or publish advertisements or publicize in print or electronic media or any other manner whatsoever in connection with this Agreement, the contents/provisions thereof, other information relating to this Agreement, the Purpose, the Confidential Information or other matter of this Agreement, without the prior written approval of the other Party.
4. **Term:** This Agreement shall be effective from the date hereof and shall continue till the earlier to occur of (i) the expiration of 1 (one) year from the date of this Agreement unless renewed by both the parties in writing and (ii) till expiration or termination of this Agreement due to cessation of the business relationship between _____ and EXIM. However, the confidentiality obligations shall survive the termination of this Agreement. Upon expiration or termination as contemplated herein the Receiving Party shall immediately, cease any and all disclosures or uses of the Confidential Information and at the request of the Disclosing Party promptly return or destroy all written, graphic or other tangible forms of the Confidential information and all copies, abstracts, extracts, samples, notes or modules thereof. That portion of the Information which consists of analyses, compilations, studies or other documents or data prepared by the Receiving Party or its representatives, will continue to be held by the Receiving Party and will be treated as confidential.
5. **Title and Proprietary Rights:** Notwithstanding the disclosure of any Confidential Information by the Disclosing Party to the Receiving Party, the Disclosing Party shall retain title and all intellectual property and proprietary rights in the Confidential Information. No license under any trademark, patent or copyright, or application for same which are now or thereafter may be

obtained by such Party is either granted or implied by the conveying of Confidential Information. The Receiving Party shall not conceal, alter, obliterate, mutilate, deface or otherwise interfere with any trademark, trademark notice, copyright notice, confidentiality notice or any notice of any other proprietary right of the Disclosing Party on any copy of the Confidential Information, and shall reproduce any such mark or notice on all copies of such Confidential Information. Likewise, the Receiving Party shall not add or emboss its own or any other any mark, symbol or logo on such Confidential Information.

6. **Return of Confidential Information:** Upon written demand of the Disclosing Party, the Receiving Party shall (i) cease using the Confidential Information,
(ii) return the Confidential Information and all copies, abstract, extracts, samples, notes or modules thereof to the Disclosing Party within seven (7) days after receipt of notice, and (iii) upon request of the Disclosing Party, certify in writing that the Receiving Party has complied with the obligations set forth in this agreement.
7. **Remedies:** Both parties acknowledge that the Confidential Information to be disclosed hereunder is of a unique and valuable character, and that the unauthorized dissemination of the Confidential Information would destroy or diminish the value of such information. The Receiving Party acknowledges that if the Receiving Party fails to comply with any of its obligations hereunder, the Disclosing Party may suffer immediate, irreparable harm for which monetary damages may not be adequate. The Receiving Party agrees that, in addition to all other remedies provided at law or in equity, the Disclosing Party shall be entitled to injunctive relief hereunder.
8. **Entire Agreement, Amendment, and Assignment:** This Agreement constitutes the entire agreement between the Parties relating to the matters discussed herein and supersedes any and all prior oral discussions and/or written correspondence or agreements between the Parties. This Agreement may be amended or modified only with the mutual written consent of the Parties. Neither this Agreement nor any right granted hereunder shall be assignable or otherwise transferable.
9. **Notices:** Any notice or other communication under this Agreement shall be in writing and shall be delivered personally, or sent by pre-paid first class post or recorded delivery or by

commercial courier or by electronic mail, to a party at its address as set out below:

Disclosing Party: Export – Import Bank of India

Receiving Party: _____

or as otherwise specified by a party by notice in writing to the other party.

Any notice or other communication shall be deemed to have been duly received:

- i. if delivered personally, when left at the address and for the contact referred to in this clause; or
- ii. if sent by pre-paid first class post or recorded delivery, at 11.00 am on the fourth business day after posting; or
- iii. if delivered by commercial courier, on the date and at the time that the courier's delivery receipt is signed; or
- iv. if sent by an electronic mail, on the day of receipt, if received before 11.00 a.m on a business day, or otherwise on the first business day after receipt.

10. **Governing Law and Jurisdiction:** The provisions of this Agreement shall be governed by the laws of India and the parties submit to the jurisdiction of courts/tribunals at Mumbai.

11. **General:** The Receiving Party shall not reverse-engineer, decompile, disassemble or otherwise interfere with any Confidential Information disclosed hereunder.

All Confidential Information is provided on “as is” basis. In no event shall the Disclosing Party be liable for the inaccuracy or incompleteness of the Confidential Information. None of the Confidential Information disclosed by the Parties constitutes any representation, warranty, assurance, guarantee or inducement by either Party to the other with respect to the fitness of such Confidential Information for any particular purpose or infringement of trademarks, patents, copyrights or any right of third persons. Each party agrees to maintain and go by all the extant laws, regulatory guidelines and such other similar regulations.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first above written.

Disclosing Party

Receiving Party

By _____

By _____

Name:

Name:

Title:

Title:

Manufacturer's Authorization Form (MAF)

Date: _____

To,
Mr. Dharmendra Sachan,
General Manager,
Export- Import Bank of India, 21st Floor, Centre One,
World Trade Centre,
Cuffe Parade, Mumbai 400 005

Tender Ref. No: **EXIM/RFP/2019-20/080**

Name of Tender: Data center Design and Construction for Export-Import Bank of India

Dear Sir,

We _____ (**OEM Name**) who are established and reputable manufactures of _____ having factory at _____ do hereby authorize (**Bidder Name**), (**Bidder Address**) who intends to bid, negotiate and conclude the contract with you against the above mentioned tender reference for our range of products.

Our full support is extended to them in all respects for supply and installation. Further, **we (OEM / Manufacturer name)** shall provide support services (as per SLA) during entire warranty and AMC period directly by us for the offered solution (hardware as well as software) as per the terms and conditions of the tender.

We also undertake that in case of default in execution of this tender by the (**Bidder Name**), the (**OEM/Company Name**) will take all necessary steps for successful execution of this project as per tender requirements.

We hereby extend our full guarantee and warranty as per terms and conditions of the tender and the contract for the equipment and services offered against this invitation for tender offer by the above firm.

Yours faithfully,
(Name of bidder)

for and on behalf of

M/s _____
(Name of manufactures)

INTEGRITY PACT

Between

Export-Import Bank of India (EXIM BANK) hereinafter referred to as “The Principal”,

And

..... hereinafter referred to as “The Bidder/ Contractor”

Preamble

The Principal intends to award, under laid down Organizational procedures, contract/s for “Design and Construction of Data Centre”. The Principal values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness / transparency in its relations with its Bidder(s) and / or Contractor(s).

In order to achieve these goals, the Principal will appoint Independent External Monitors (IEMs) who will monitor the tender process and the execution of the contract for compliance with the Principles mentioned above.

Section 1 - Commitments of the Principal

- (1) The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-
 - a. No employee of the Principal, personally or through family members, will in connection with the tender for , or the execution of a contract, demand; take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - b. The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
 - c. The Principal will exclude from the process all known prejudiced persons.
- (2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act, or if there be a substantive Suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

Section 2 - Commitments of the Bidder(s)/ Contractor(s)

- (1) The Bidder(s) / Contractor(s) commit themselves to take all measures necessary to prevent corruption. The Bidder(s) / Contractor(s) commit themselves to observe the following principles during participation in the tender process and during the contract execution.
 - a. The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal’s employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange

any advantage of any kind whatsoever during the tender process or during the execution of the contract.

- b. The Bidder(s)/ Contractor(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
- c. The Bidder(s)/ Contractor(s) will not commit any offence under the relevant IPC/PC Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- d. The Bidder(s)/ Contractors(s) of foreign origin shall disclose the name and address of the Agents/representatives in India, if any. Similarly the Bidder(s)/ Contractors(s) of Indian Nationality shall furnish the name and address of the foreign principals, if any.
- e. The Bidder(S)/ Contractor(s) will, when presenting their bid, disclose any and all payments made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- f. Bidder(s)/Contractor(s) who have signed the Integrity Pact shall not approach the Courts while representing the matter to IEMs and shall wait for their decision in the matter.

- (2) The Bidder(s)/ Contractor(s) will not instigate third person to commit offences outlined above or be an accessory to such offences.

Sanction 3 - Disqualification from tender process and exclusion from future contracts

If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of Section 2, above or in any other form such as to put their reliability or credibility in question, the Principal is entitled to disqualify the bidder(s)/ Contractors(s) from the tender process.

Sanction 4 – Compensation for Damages

- (1) If the principal has disqualified the Bidder(s) from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/Bid Security.
- (2) If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to Section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages of the Contract value or the amount equivalent to Performance Bank Guarantee.

Section 5 - Previous transgression

- (1) The Bidder declares that no previous transgressions occurred in the last three years with any other Company in any country conforming to the anti-corruption approach or with any Public Sector Enterprise in India that could justify his exclusion from the tender process.
- (2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process.

Section 6 — Equal treatment of all Bidders / Contractors / Subcontractors

- (1) In ease of Sub-contracting, the Principal Contractor shall take the responsibility of the adoption of Integrity Pact by the Sub-contractor.
- (2) The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors.
- (3) The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

Section 7 - Criminal charges against violating Bidder(s) / Contractor(s) / Subcontractor(s)

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the same to the Chief Vigilance Officer.

Section 8 - Independent External Monitor

- (1) The Principal has appointed competent and credible Independent External Monitor for this Pact after approval by Central Vigilance Commission. Names and Addresses of the Monitors are given below;

Shri Debabrata Sarkar Ex-CMD, Union Bank of India Mayfair Boulevard (Narayan Apartment) Flat No.701, Main Avenue Road Santacruz (West) , Mumbai – 400054 Email: dsarkar53@gmail.com Mobile: 08879684000	Shri S K Goel Ex-CMD, IIFCL Villa No.77, Kelisto Town Homes, Jaypee Wish Town, Sector-128 Noida-202303 Email: subodhgoel22@gmail.com Mobile:09650867778
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The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.

- (2) The Monitor is not subject to instructions by the representatives of the parties and performs his/her functions neutrally and independently. The Monitor would have access to all Contract documents, whenever required. It will be obligatory for him / her to treat the information and documents of the Bidders/Contractors as confidential. He/ she reports to the Managing Director (MD), EXIM BANK.

- (3) The Bidder(s)/Contractor(s) accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his/her request and demonstration of a valid interest, unrestricted and unconditional access to their project documentation. The same is applicable to Sub-contractors.
- (4) The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s)/ Sub-contractor(s) with confidentiality. The Monitor has also signed declarations on 'Non-Disclosure of Confidential Information' and of 'Absence of Conflict of Interest'. In case of any conflict of interest arising at a later date, the IEM shall inform Managing Director (MD), EXIM BANK and recuse himself / herself from that case.
- (5) The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
- (6) As soon as the Monitor notices, or believes to notice, a violation of this agreement, he/she will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
- (7) The Monitor will submit a written report to the Managing Director (MD), EXIM BANK within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposals for correcting problematic situations.
- (8) If the Monitor has reported to the Managing Director (MD), EXIM BANK, a substantiated suspicion of an offence under relevant IPC/ PC Act, and the Managing Director (MD), EXIM BANK has not, within the reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.
- (9) The word '**Monitor**' would include both singular and plural.

Section 9 - Pact Duration

This Pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the contract, and for all other Bidders 6 months after the contract has been awarded. Any violation of the same would entail disqualification of the bidders and exclusion from future business dealings.

If any claim is made / lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged / determined by Managing Director (MD) of EXIM BANK.

Section 10 - Other provisions

- (1) This agreement is subject to Indian Law. Place of performance and jurisdiction is the Registered Office of the Principal, i.e. Mumbai.
- (2) Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.

- (3) If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- (4) Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- (5) Issues like Warranty / Guarantee etc. shall be outside the purview of IEMs.
- (6) In the event of any contradiction between the Integrity Pact and its Annexure, the Clause in the Integrity Pact will prevail.

(For & On behalf of the Principal)

(For & On behalf of Bidder/Contractor)

(Office Seal)

(Office Seal)

Place _____

Date _____

Witness 1:

(Name & Address)

Witness 2:

(Name & Address)

Price Validity

(To be submitted in the Bidder's letterhead)

To,
Mr. Dharmendra Sachan,
General Manager,
Export- Import Bank of India, 21st Floor, Centre One,
World Trade Centre,
Cuffe Parade, Mumbai 400 005.

Sub: E-Tender Reference No.: _____

Dear Sir,

We hereby confirm that, the Product quoted unit price is valid for 90 days from tender opening date.

Yours faithfully,

(Authorized Signatory of Bidder)

Date:

(Company Seal)

Statement of Nil Deviations

(To be submitted in the Bidder's letterhead)

To,
Mr. Dharmendra Sachan,
General Manager,
Export- Import Bank of India, 21st Floor, Centre One,
World Trade Centre,
Cuffe Parade, Mumbai 400 005

Re: Tender RFP Ref: _____

Dear Sir,

There are no deviations (nil deviations) from the terms and conditions of the tender. All the terms and conditions of the tender are acceptable to us.

Yours faithfully,

(Authorized Signatory of Bidder)

Date:

(Company Seal)

Typical Data Center Network Architecture:

