NIT NO.:/ MDU-R/MAR/2019/005

PROCUREMENT OF VARIOUS EQUIPMENTS FOR UP-GRADATION OF DATACENTER INFRASTRUCRURE

Last date submission of the filled Tender document: 22.03.2019 up to 2:30 pm.
(The Tender document is to be submitted duly signed in blue/black ink on each page and stamped with official seal on each page)

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Maharshi Dayanand University, Rohtak

[Established in Act No. 25 of 1975 of the Haryana Legislative Assembly in 1976]

NAAC Accredited 'A' Grade

No. UCC/2019/…….. Dated : 01/03/2019

University Computer Center

Phone: 01262-393548 **E-mail: dir.ucc@mdurohtak.ac.in**

STANDARD BIDDING DOCUMENT FOR PROCUREMENT OF VARIOUS EQUIPMENTS FOR UP-GRADATION OF DATACENTER INFRASTRUCRURE.

PART1: COMPLETE BIDDING DOCUMENT

PRESS NOTICE

M. D. UNIVERSITY, ROHTAK **Notice Inviting E-Tender**	
Name of work	Data Centre build in aspects of Electrical, Civil, and Integrated Building Management System for MDU, Rohtak
E Service Fees+ Tender Doc. Fees	1000/- + 4,000/- =5,000/- (TO BE PAID ONLINE)
Earnest Money **Time Limit**	2% OF THE QUOTED RATE 21 DAYS
Tenders to be received till: 22.03.2019 till 02:30 P.M	
(1) THE TENDERS WILL BE RECEIVED ONLY THROUGH E-TENDERING FOR FURTHER DETAILS VISIT WEBSITE HTTPS://HARYANAEPROCUREMENT.GOV.IN.	

REGISTRAR

The Bidders can download the tender documents from the Portal:
https://mdurohtak.haryanaeprocurement.gov.in

1) Earnest Money and Document Fee Deposit have to be deposited through Online Mode Only.
2) Willing Contractors shall have to pay the e- service fees of Rs.1000/- through Online mode
3) However, the details of the EMD, Tender document Fee & E–Service Fee are required to be filled/provided scan copies at the time of online Bid Preparation Stage the Bidders are required to keep the EMD, Tender document fee & E- Service fee details ready beforehand. The contractual Agencies can submit their tender documents as per the date mentioned below:

KEY DATES

Sr. No.	M.D.U. Rohtak Stage	Contractor Stage	Start Date & Time	End Date & Time
1		Tender Document Download and Bid Preparation & Submission	**01-03-2019**	**22.03.2019 till 02:30 P.M**
3		Submission of Tender Fees and online EMD Fees	**01-03-2019**	**22.03.2019 till 02:30 P.M**
4		Manual Submission of Specification of Item, Tender Document Fee, EMD, E-Service Fee etc. in University Computer Centre	**22.03.2019 till 02:30 P.M**	**22.03.2019 till 02:30 P.M**
5	Technical Opening/ Technical Evaluation/ Opening of Financial Bid		**22.03.2019 till 02:30 P.M** FIANANCIAL DATE WILL BE DECIDED LATER ON	

Important Note:-

1) The bidders shall have to complete Bid Preparation & Submission" stage on scheduled date & time as mentioned above. If any bidder failed to complete his/her aforesaid stage in the stipulated online time schedule for this stage, his/her bid status will be considered as "bids not submitted".
2) Bidder must confirm & check his/her bid status after completion of his/her all activities for e-bidding.
3) Bidder can rework on his/her bids even after completion of "Bid Preparation & submission stage" (Bidder Stage), subject to the condition that the rework must take place before the stipulated time frame of the Bidder Stage.

DETAIL NOTICE INVITING TENDER

e-Tender is invited for purchase of below mentioned items in single stage two cover system i.e. Request for Technical Bid (online Bid under PQQ/ Technical Envelope) and Request for Financial Bid (comprising of price bid Proposal under online available Commercial Envelope).

1. Detailed notice inviting tender/estimate drawing can be seen in the office of the undersigned during office hours.
2. Bidding documents available on website http://mdurohtak.haryanaeprocurement.gov.in
3. Newly enlisted contractors/societies/suppliers/manufactures should bring with them proof of their enlistment in appropriate class.
4. The bidders would submit bid through e-tendering only on the website i.e. http://haryanaeprocurement.gov.in

Under this process, the Pre-qualification/ Technical online bid Application as well as online Price Bid shall be invited at single stage under two covers i.e. PQQ/Technical & Commercial Envelope. Eligibility and qualification of the Applicant will be first examined based on the details submitted online under first cover (PQQ or Technical) with respect to eligibility and qualification criteria prescribed in this Tender document. The Price Bid under the second cover shall be opened for only those Applicants whose PQQ/ Technical Applications are responsive to eligibility and qualifications requirements as per Tender document.

1. The payment for Tender Document Fee and e-Service Fee shall be made by eligible bidders online directly through Debit Cards & Internet Banking Accounts and the payment for EMD can be made online directly through RTGS/NEFT or OTC Please refer to 'Online Payment Guideline' available at the Single e-Procurement portal of GoH (Govt. of Haryana) and also mentioned under the Tender Document.

2. Intending bidders will be mandatorily required to online sign-up (create user account) on the website https://haryanaeprocurement.gov.in to be eligible to participate in the e-Tender. The firm will be required to make online payment of 2% of the bid cost towards EMD fee in due course of time. The intended bidder fails to pay EMD fee under the stipulated time frame shall not be allow to submit his / her bids for the respective event / Tenders.

3. The interested bidders must remit the funds at least T+1 working day (Transaction day + One working Day) in advance and make payment via RTGS /NEFT or OTC to the beneficiary account number specified under the online generated challan. The intended bidder / Agency thereafter will be able to successfully verify their payment online, and submit their bids on or before the expiry date & time of the respective events/Tenders at https://haryanaeprocurement.gov.in.

The interested bidders shall have to pay mandatorily e-Service fee (under document fee – Non-refundable) of Rs.1000/- (Rupee One Thousand Only) online by using the service of secure electronic gateway. The secure electronic payments gateway is an online interface between bidders & online payment authorization networks.

The Payment for document fee/ e-Service fee can be made by eligible bidders online directly through Debit Cards & Internet Banking.

The Bidders can submit their tender documents (Online) as per the dates mentioned at Page no 3 of Document: -

Important Note:

1. The Applicants/bidders have to complete 'Application / Bid Preparation & Submission' stage on scheduled time as mentioned above. If any Applicant / bidder failed to complete his / her aforesaid stage in the stipulated online time schedule for this stage, his / her Application/bid status will be considered as 'Applications / bids not submitted'.
2. Applicant/Bidder must confirm & check his/her Application/bid status after completion of his/her all activities for e-bidding.
3. Applicant/Bidder can rework on his/her bids even after completion of 'Application/Bid Preparation & submission stage' (Application/Bidder Stage), subject to the condition that the rework must take place during the stipulated time frame of the Applicant/Bidder Stage.
4. In the first instance, the online payment details of tender document fee + e-Service and EMD & PQQ/Technical Envelope shall be opened. Henceforth financial bid quoted against each of the item by the shortlisted bidder/ Agency wherever required shall be opened online in the presence of such bidders/ Agency who either themselves or through their representatives choose to be present. The bidder can submit online their bids as per the dates mentioned in the schedule/Key Dates above.

The bids shall be submitted online in two separate envelopes:

Envelope 1: Technical Bid

The bidders shall upload the required eligibility & technical documents online in the Technical Bid.

Envelope 2: Commercial Bid

The bidders shall quote the prices in price bid format under Commercial Bid.

CONDITIONS: -

1. DNIT & prequalification criteria can be seen on any working day during office hours in office of the undersigned.
2. Conditional tenders will not be entertained & are liable to be rejected.
3. In case the day of opening of tenders happens to be holiday, the tenders will be opened on the next working day. The time and place of receipt of tenders and other conditions will remain unchanged.
4. The undersigned reserve the right to reject any tender or all the tenders without assigning any reasons.
5. The societies shall produce an attested copy of the resolution of the Co-operative department for the issuance of tenders.
6. The tender without earnest money/bid security will not be opened.
7. The Jurisdiction of court will be at **Rohtak**.
8. The tender of the bidder who does not satisfy the qualification criteria in the bid documents are liable to be rejected summarily without assigning any reason and no claim whatsoever on this account will be considered.
9. The bid for the work shall remain open for acceptance during the bid validity period to be reckoned from the last date of 'Manual submission of BS. If any bidder/tenders withdraws his bid/tender before the said period or makes any modifications in the terms and conditions of the bid, the earnest money shall stand forfeited. Bids shall be valid for 120 days from the date of bid closing i.e. from last date of manual submission of EMD. In case the last day to accept the tender happens to be holiday, validity to accept tender will be the next working day.

For & on behalf of Registrar, MDU, Rohtak

P&S

M. D. University, Rohtak

INSTRUCTIONS TO BIDDER ON ELECTRONIC TENDERING SYSTEM

These conditions will over-rule the conditions stated in the tender documents, wherever relevant and applicable.

REGISTRATION OF BIDDERS ON E-PROCUREMENT PORTAL: -

All the bidders intending to participate in the tenders process online are required to get registered on the centralized e - Procurement Portal i.e. https://haryanaeprocurement.gov.in. Please visit the website for more details.

OBTAINING A DIGITAL CERTIFICATE:

1.1 The Bids submitted online should be encrypted and signed electronically with a Digital Certificate to establish the identity of the bidder bidding online. These Digital Certificates are issued by an Approved Certifying Authority, by the Controller of Certifying Authorities, Government of India.

1.2 A Digital Certificate is issued upon receipt of mandatory identity (i.e. Applicant's PAN Card) and Address proofs and verification form duly attested by the Bank Manager / Post Master / Gazetted Officer. Only upon the receipt of the required documents, a digital certificate can be issued. For more details, please visit the website – https://haryanaeprocurement.gov.in.

1.3 The bidders may obtain Class-II or III digital signature certificate from any Certifying Authority or Sub-Certifying Authority authorized by the Controller of Certifying Authorities or may obtain information and application format and documents required for the issue of digital certificate from:

M/s Nextenders (India) Pvt. Ltd.
O/o. DS&D Haryana,
SCO – 09, IInd Floor,
Sector – 16,
Panchkula – 134108
E-mail: chandigarh@nextenders.com
Help Desk: 1800-180-2097 (Toll Free Number)

1.4 The bidder must ensure that he/she comply by the online available important guidelines at the portal https://haryanaeprocurement.gov.in for Digital Signature Certificate (DSC) including the e-Token carrying DSCs.

1.5 Bid for a particular tender must be submitted online using the digital certificate (Encryption & Signing), which is used to encrypt and sign the data during the stage of bid preparation. In case, during the process of a particular tender, the user loses his digital certificate (due to virus attack, hardware problem, operating system or any other problem) he will not be able to submit the bid online. Hence, the users are advised **to keep a backup of the certificate** and also keep the copies at safe place under proper security (for its use in case of emergencies).

1.6 In case of online tendering, if the digital certificate issued to the authorized user of a firm is used for signing and submitting a bid, it will be considered equivalent to a no-objection certificate /power of attorney / lawful authorization to that User. The firm has to authorize a specific individual through an authorization certificate signed by all partners to use the digital certificate as per Indian

Information Technology Act 2000. Unless the certificates are revoked, it will be assumed to represent adequate authority of the user to bid on behalf of the firm in the department tenders as per Information Technology Act 2000.

1.7 The digital signature of this authorized user will be binding on the firm.

1.8 In case of any change in the authorization, it shall be the responsibility of management / partners of the firm to inform the certifying authority about the change and to obtain the digital signatures of the new person / user on behalf of the firm / company. The procedure for application of a digital certificate however will remain the same for the new user.

1.9 The same procedure holds true for the authorized users in a private/Public limited company. In this case, the authorization certificate will have to be signed by the directors of the company.

OPENING OF AN ELECTRONIC PAYMENT ACCOUNT:

For purchasing the tender documents online, bidders are required to pay the tender documents fees online using the electronic payments gateway service shall be integrated with the system very soon till then it will be submitted manually. For online payments guidelines, please refer to the Home page of the e-tendering Portal https://haryanaeprocurement.gov.in.

Pre-requisites for online *bidding*:

In order to operate on the electronic tender management system, a user's machine is required to be set up. A help file on system setup/Pre-requisite can be obtained from Nextenders (India) Pvt. Ltd. or downloaded from the home page of the website -https://haryanaeprocurement.gov.in.. The link for downloading required java applet & DC setup are also available on the Home page of the e-tendering Portal.

ONLINE VIEWING OF DETAILED NOTICE INVITING TENDERS:

The bidders can view the detailed N.I.T and the time schedule (Key Dates) for all the tenders floated through the single portal eProcurement system on the Home Page at https://haryanaeprocurement.gov.in.

DOWNLOAD OF TENDER DOCUMENTS:

The tender documents can be downloaded free of cost from the eProcurement portal https://haryanaeprocurement.gov.in

KEY DATES:

The bidders are strictly advised to follow dates and times as indicated in the online Notice Inviting Tenders. The date and time shall be binding on all bidders. All online activities are time tracked and the system enforces time locks that ensure that no activity or transaction can take place outside the start and end dates and the time of the stage as defined in the online Notice Inviting Tenders.

ONLINE PAYMENT OF TENDER DOCUMENT FEE, ESERVICE FEE , EMD FEES & BID PREPARATION & SUBMISSION (PQQ/ TECHNICAL & COMMERCIAL/PRICE BID):

i) Online Payment of Tender Document Fee + e-Service fee**:**

The online payment for Tender document fee, eService Fee & EMD can be done using the secure electronic

payment gateway. The Payment for Tender Document Fee and eService Fee shall be made by bidders/ Vendors online directly through Debit Cards & Internet Banking Accounts and the Payment for EMD shall be made online directly through RTGS / NEFT & OTC. The secure electronic payments gateway is an online interface between contractors and Debit card / online payment authorization networks.

ii) PREPARATION & SUBMISSION of online APPLICATIONS/BIDS**:**

Detailed Tender documents may be downloaded from e-procurement website (https://haryanaeprocurement.gov.in) and tender mandatorily be submitted online.

Scan copy of Documents to be submitted/uploaded for Prequalification or Technical bid under online PQQ/ Technical Envelope: The required documents (refer to DNIT) shall be prepared and scanned in different file formats (in PDF /JPEG/MS WORD format such that file size is not exceed more than 10 MB) and uploaded during the on-line submission of PQQ or Technical Envelope.

FINANCIAL or Price Bid PROPOSAL shall be submitted mandatorily online under Commercial Envelope and original not to be submitted manually)

ASSISTANCE TO THE BIDDERS: -

In case of any query regarding process of e-tenders and for undertaking training purpose, the intended bidder can also avail the following and can contact service provider as per below:

Office Timings of Help-desk support for Single e Procurement Portal of Government of Haryana-Technical Support Assistance will be available over telephone Monday to Friday (09:00 am. to 5:30 pm) & Training workshop will be conducted on every 1st, 2nd Friday (from 3:30 pm upto 6:00 pm) and 4th Saturday (from 11:30 am upto 3:00 pm) of each month.

All queries would require to be registered at our official email-chandigarh@nextenders.com for on-time support (Only those queries which are sent through email along with appropriate screenshots or error description will be considered as registered with the Help-desk)

IMPORTANT NOTE: -

(a) Any intending bidder can contact the helpdesk on or before prior to 4 hours of the scheduled closing date & time of respective e-Auction/ Tender event.

(b) For queries pertaining to e-Payment of EMD, please contact the helpdesk at least 2 business days prior to the closing date & time of e-Auction/Tender event.

(c) Help-desk support will remain closed during lunch break i.e. from 1:30 PM up to 2:15 PM on each working day.

SCHEDULE FOR TRAINING:

Training workshop will be held on 1st, 2nd Friday (from 3:30 pm upto 6:00 pm) and 4th Saturday (from 11: 30 am upto 3:00 pm) of each month at following addresses:		
Nextenders (India) Pvt. Ltd Municipal Corporation Faridabad, Near B.K. Chowk, Opp. B.K.Hospital, NIT, **Faridabad** Contact no.	Nextenders (India) Pvt. Ltd. Public Health Division No. 2 Hisar, Model Town Opp. N.D Gupta Hospital, **Hisar**	Nextenders (India) Pvt. Ltd., Nirman Sadan (PWD B&R), Plot No.- 01, Basement, Dakshin Marg, Sec- 33 A, **Chandigarh** -160020 **For Support- 1800-180-2097**,

Haryana eProcurement Help Desk Office will remain closed on Saturday (except 4th Saturday), Sunday and National Holidays

NOTE:- Bidders participating in online tenders shall check the validity of his/her Digital Signature Certificate before participating in the online Tenders at the portal https://haryanaeprocurement.gov.in.

For help manual please refer to the 'Home Page' of the e-Procurement website at https://haryanaeprocurement.gov.in, and click on the available link 'How to...?' to download the file.

GUIDELINE FOR ONLINE PAYMENTS IN E-TENDERING

Post registration, bidder shall proceed for bidding by using both his digital certificates (one each for encryption and signing). Bidder shall proceed to select the tender he is interested in. On the respective Department's page in the e-tendering portal, the Bidder would have following options to make payment for tender document & EMD:

i. Debit Card
ii. Net Banking
iii. RTGS/NEFT

OPERATIVE PROCEDURES FOR BIDDER PAYMENTS

A) DEBIT CARD

The procedure for paying through Debit Card will be as follows.

i. Bidder selects Debit Card option in e-Procurement portal.
ii. The e-Procurement portal displays the amount and the card charges to be paid by bidder. The portal also displays the total amount to be paid by the bidder.
iii. Bidder clicks on "Continue" button

iv. The e-Procurement portal takes the bidder to Debit Card payment gateway screen.

v. Bidder enters card credentials and confirms payment

vi. The gateway verifies the credentials and confirms with “successful” or “failure” message, which is confirmed back to eProcurement portal.

vii. The page is automatically routed back to e-Procurement portal

viii. The status of the payment is displayed as “successful” in e-Procurement portal. The e-Procurement portal also generates a receipt for all successful transactions. The bidder can take a print out of the same,

ix. The e-Procurement portal allows Bidder to process another payment attempt in case payments are not successful for previous attempt.

B) NET BANKING

The procedure for paying through Net Banking will be as follows.

i. Bidder selects Net Banking option in e-Procurement portal.

ii. The e-Procurement portal displays the amount to be paid by bidder.

iii. Bidder clicks on “Continue” button

iv. The e-Procurement portal takes the bidder to Net Banking payment gateway screen displaying list of Banks (v) Bidder chooses his / her Bank

v. The Net Banking gateway redirects Bidder to the Net Banking page of the selected Bank

vi. Bidder enters his account credentials and confirms payment

vii. The Bank verifies the credentials and confirms with “successful” or “failure” message to the Net Banking gateway which is confirmed back to e-Procurement portal.

viii. The page is automatically routed back to e-Procurement portal

ix. The status of the payment is displayed as “successful” in e-Procurement portal.

The e-Procurement portal also generates a receipt for all successful transactions. The bidder can take a print out of the same. (xi) The e-Procurement portal allows Bidder to process another payment attempt in case payments are not successful for previous attempt.

C) RTGS/ NEFT

The bidder shall have the option to make the EMD payment via RTGS/ NEFT. Using this module, bidder would be able to pay from their existing Bank account through RTGS/NEFT. This would offer a wide reach for more than 90,000 bank branches and would enable the bidder to make the payment from almost any bank branch across India.

I. Bidder shall log into the client e-procurement portal using user id and password as per existing process and selects the RTGS/NEFT payment option.

II. Upon doing so, the e-procurement portal shall generate a pre-filled challan. The challan will have all the details that is required by the bidder to make RTGS-NEFT payment. iii.

III. Each challan shall therefore include the following details that will be pre- populated:

- Beneficiary account no: (unique alphanumeric code for e-tendering)
- Beneficiary IFSC Code:
- Amount:
- Beneficiary bank branch:
- Beneficiary name:

iv. The Bidder shall be required to take a print of this challan and make the RTGS/NEFT on the basis of the details printed on the challan.

v. The bidder would remit the funds at least T + 1 day (Transaction + One day) in advance to the last day and make the payment via RTGS / NEFT to the beneficiary account number as mentioned in the challan.

vi. Post making the payment, the bidder would login to the e-Tendering portal and go to the payment page. On clicking the RTGS / NEFT mode of payment, there would be a link for real time validation. On clicking the same, system would do auto validation of the payment made.

D) OVER-THE-COUNTER (OTC)

This solution shall allow the bidder having account with ICICI Bank, to make the payment from any CMS enabled Branch of ICICI Bank in India. Bidders can make the payment via cash (if amount is<= 49,999), ICICI Bank Cheque.

The procedure for paying through OTC mode is as follows:

i Bidder selects Over-the-Counter remittance option in e-Procurement portal.

ii The e-Procurement portal displays the amount to be paid. Bidder chooses the bank account no. for refund of the amount.

iii Bidder clicks on “Continue” button

iv (iv)The e-Procurement portal displays the details of payment. Bidders clicks on “print _challan” and prints the OTC challan.

v Bidder submits the OTC challan at the counter of any designated branch of ICICI Bank with

vi Cash / Demand Draft / ICICI Bank Cheque (Payment in cash is allowed upto Rs. 49,999/-)

vii ICICI Bank verifies the URN (format to be discussed and decided) and Amount with e-Procurement portal prior to accepting the payment

viii On successful verification from e-Procurement portal, ICICI Bank accepts the payment. In case of failure, ICICI Bank shall return back the OTC challan and payment to the Bidder.

ix ICICI Bank will commit the payment transaction (in case of successful verification from e-Procurement portal) and sends the Bank Transaction Number (I-Sure Reference Number) online against the URN and Amount.

x ICICI Bank will generate receipt for the payment transaction and issues the same to the Bidder.

xi The e-Procurement system updates the bank transaction number against the URN and Amount based on details sent by ICICI Bank online prior to generation of receipt.

xii The status of payment will be displayed as “verification successful” in e-Procurement portal, when the bidder clicks on verification option in the portal

xiii Bidder would be required to upload the scan copy of receipt as received from ICICI Bank as part of proof in Nex-tender portal before submitting the tender

IMPORTANT NOTES(DO'S/DON'T)

Sr no.	Scenario	Do's / Don'ts
1	**In the event of making Payment through NEFT/RTGS**	Do's • It is the bidder's responsibility to ensure that RTGS/NEFT payments are made to the exact details as mentioned in the challan which are: 1) Beneficiary account no: <client code> + <random number> 2) Beneficiary IFSC Code: As prescribed by ICICI Bank (this shall remain same across all tenders) • Amount: As mentioned on the challan. It is specific for every tender/transaction • Beneficiary bank branch: ICICI Bank Ltd, CMS • Beneficiary name: As per the challan • For every tender, details in the challan are different and specific to that tender only. Bidder should not make use of a challan for making payment for another tenders' EMD • It is advised that all the bidders make payment via RTGS/NEFT at least one day in advance to the last day of tender submission as certain amount of time is required for settlement and various parties are involved. The payment may not be available for the bidder validation. In such cases bidder may not be able to submit the tender • Bidder has to make only single payment against a challan as per the amount mentioned on the challan. • Bidder must do the payment before tender validity gets expired **Don'ts** • Bidder should not enter erroneous details while filling the NEFT/RTGS form at their bank. The following possibilities may arise: 1) Incorrect IFSC code mentioned: - Transaction would be rejected and the amount would be refunded back in to the bidders account 2) Incorrect Beneficiary account number mentioned (<client code> + <random number>): - a) In case, the beneficiary account number mentioned is incorrect the transaction would be rejected and the bid would not be accepted. 3) Incorrect Amount mentioned: The amount would be rejected if the amount mentioned in while making the payment is incorrect. Such cases will be captured as unreconciled transactions and will be auto-refunded directly to bidder's account. In the event of any discrepancy, payment would not be considered and bidder would not be allowed to bid/ participate. • Bidder is not supposed to use challan generated in one tender for payment against another tender since details in the challan are unique to the tender and bidder combination. • Bidder must not make multiple or split payments against a particular challan. Any split payment received against the same challan will be refunded back to the bidder.

		• Bidder would not be entitled to claim that he is deprived of participating in the tender because his funds are blocked with the division on account of incorrect payment made by the bidder
2	**In the event of making Payment through OTC**	**Do's** It is the bidder's responsibility to ensure that OTC payments are made to the exact details as mentioned in the challan which are: Beneficiary account no: <client code> + <random number> Amount: As mentioned on the challan It is specific for every tender/transaction Beneficiary name: As per the challan Bidder has to make only single payment against a challan as per the amount mentioned on the challan Bidder must do the payment before tender validity gets expired Bidder needs to mandatorily upload the scan copy of the payment receipt issued by ICICI Bank, in Nextender Portal before submitting the Tender
		Don'ts • If the bidding amount is greater than Rs49,999, then • Bidder should not make payment in cash. In this case, • Bidder should pay via Demand Draft/ICICI Bank Cheque • It is bidder's responsibility to ensure that Demand draft should be valid and should not have discrepancies such as signature not found, stale DD, mutilated, material alteration, favouring third party etc., In the event of Demand Draft returned by bidder's Bank on account of such discrepancies, ICICI Bank shall ensure that such communication is sent to the Client within 3 days from the date of rejection by the Bidder's Bank • For every tender, details in the challan are different and specific to that tender only. Bidder should not make use of a challan for making payment for another tenders' EMD

COVERING LETTER:

FORMAT OF LETTER TO BE SUBMITTED WITH THE TENDER FOR PROCUREMENT OF VARIOUS EQUIPMENTS FOR UP-GRADATION OF DATACENTER INFRASTRUCRURE., UNIVERSITY COMPUTER CENTRE, M.D. UNIVERSITY, ROHTAK- 124001.

TO,

Deputy Registrar
Purchase & Supply Branch
MD University
Rohtak – 124001 (Haryana)

SUB: PROCUREMENT OF VARIOUS EQUIPMENTS FOR UP-GRADATION OF DATACENTER INFRASTRUCRURE.FOR MDU, ROHTAK

Dear Sir,

1. This is with reference to your TENDER notice dated ……. I have examined the TENDER document and understood its contents. I hereby submit procurement of passive network material for completion of network upgradation project **University Computer Centre**, M.D. University, Rohtak- 124001.
2. The Bid is unconditional for the said Tender. This bid is valid for a period not less than 180 days.
3. It is acknowledged that the Authority will be relying on the information provided in the Tender and the documents accompanying such Tender for qualification of the bidders for the above subject items and we certify that all information provided in the Tender and in Annexures are true and correct; nothing has been misrepresented and omitted which renders such information misleading; and all documents accompanying the bid are true copies of their respective originals.
4. This statement is made for the express purpose of the above mentioned subject.
5. We shall make available to the Authority any additional information it may find necessary or require to supplement or authenticate the Qualification statement.
6. We acknowledge the right of the Authority to reject our bid without assigning any reason or otherwise and hereby relinquish, to the fullest extent permitted by applicable law, our right to challenge the same on any account whatsoever.
7. It is declared that:
   a) We have examined the Tender document and have no reservations to the Tender document.
   b) We have not directly or indirectly or through an agent engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice in respect of any Bid or request for proposal issued by or any Agreement entered into with the
   Authority or any other public sector enterprise or any Government, Central, State or local.
8. It is understood that the University may cancel the Bidding Process at any time without incurring any liability to the University and that you are neither bound to invite the applicants to Bid for the items nor to accept any bid that you may receive.
9. It is understood that the University can use any evaluation scheme/evaluation metrics/weightage or take the help of any consultant, as required in selecting the successful

agency/agencies and we agree to abide by it.

10. It is certified that we have not been convicted by a Court of Law or indicted or adverse orders passed by a regulatory authority which could cast a doubt on our ability to undertake the Services or which relates to a grave offence that outrages the moral sense of the community.
11. It is here by certified that the firm has not been debarred/blacklisted for any reason/period by any central/state Govt. department/University/PSU etc. if so particulars of the same may be furnished. Concealments of facts shall not only lead to cancellation of the order but may also warrant legal action. University may reject bids of firms which has been blacklisted at any time.
12. It is hereby affirmed that we are in compliance of/shall comply with the statutory requirements, as applicable.
13. We hereby irrevocably relinquish any right or remedy which we may have at any stage at law or howsoever otherwise arising to challenge or question any decision taken by the Authority in connection with the selection of bidders, selection of the Tenderer, or in connection with the selection/Bidding Process itself, in respect of the above mentioned items and the terms and implementation thereof.
14. We agree to undertake to abide by all the terms and conditions of the TENDER document.
15. We agree to undertake to be liable for all the obligations of the Tenderer under the Agreement. In witness thereof, we submit this application under and in accordance with the terms of the TENDER document.

Place:- …….

Date :…….

Yours faithfully,

(Signature, name and designation of the Tenderer/Authorized Signatory)

Official Seal

CHECK LIST FOR DOCUMENTS TO BE SUBMITTED ALONGWITH TECHNICAL BID

1. Processing Charge Rs. 4000/- through Demand Draft (Non-Refundable).
2. Bid document signed & stamped on each page.
3. A photocopy of the Authorization Certificate from OEMs.
4. Power of Attorney, as applicable, on company letter head.
5. EMD 2% of total Bid Amount.
6. Attested photocopies of Income **Tax and Sales Tax returns** for the last three Financial Years.
7. Complete BOQ mentioning the Part-codes of the equipment's along with the product brochure
8. Contact details of 3 customers, along with P.O. photocopy and/or installation report.
9. A duly attested photo copy of the Firm Registration number and PAN Number.
10. Any other information that the bidder may like to submit in support of his capabilities and performance etc.

NOTE

1. In case of any queries on technical specifications, please refer the specifications mentioned in "Annexure A" only.
2. Delivery to be made at **:**

   UNIVERSITY COMPUTER CENTRE
   MD University
   Rohtak-124 001
   Haryana, India
3. GST will be at concessional rates, as applicable to non-profit, own-use institutions.
4. Filled Bids may be personally submitted P&S Branch Rohtak or sent through Registered Post or Courier addressed to:

   UNIVERSITY COMPUTER CENTRE
   MD University
   Rohtak-124 001
   Haryana, India
5. The decision of acceptance of the Bids will lie with the competent authority of University, who does not bind himself to accept the lowest Bid and who reserves the right to himself to reject or accept any or all bid received, without assigning any reason.
6. The Bids are liable to be rejected if any of the above conditions are not fulfilled or if the bid is not accompanied with EMD and Processing Charge.
7. Number of items may vary, as required.
8. The University reserves the right to split the order among more than one Tenderers.
9. Financial Bid of the Tenderers who qualify in the Technical Bid shall be opened in presence of the authorized designated representatives and Tenderers who wish to be present there. The date of Financial Bid opening will be informed to the shortlisted bidders subsequently.
10. The University will be at liberty to involve any expert or consultant in evaluating the bid for completing the entire bid process.

SUBMISSION OF TENDER

SEALING AND MARKING OF TENDER:

1. The TENDER must be complete in all aspects and should contain requisite certificates, informative literature etc.
2. Tender Document can be downloaded from MD University Rohtak website (www.mdurohtak.ac.in).
3. This is a two part bid consisting of Technical Bid and Financial bid
4. The bid shall include:
   a. Forwarding letter by the Tenderer
   b. All required documents
   c. Tender processing charges (non-refundable)
   d. Interest free EMD (Earnest Money Deposit) in the form of Demand Draft in favour of Finance Officer MD University Rohtak, payable at Rohtak, from a Nationalized Bank to be submitted with Technical Bid.
   e. Technical Bid
   f. Financial Bid
5. TENDER should be addressed to: -

UNIVERSITY COMPUTER CENTRE
MD University
Rohtak-124
001 Haryana,
India

EXPENSES OF AGREEMENT:

All the expenses on the execution of the Agreement (if any) including cost of stamp or any other kind of expenditure incurred in the process of TENDER submission till final compliance shall be borne by the Tenderer.

DEADLINE FOR SUBMISSION OF BIDS:

TENDER must be received by the MD University Rohtak at the date, time and address specified in the TENDER notice/TENDER documents.

LATE BIDS:

Any TENDER received after the deadline specified for submission of TENDER shall be rejected without any further correspondence to the Tenderer.

TENDER OPENING

OPENING OF FINANCIAL BID:

Financial Bid (Tenders) of the Tenderers who qualify in the Technical Bid shall be opened in the presence of designated Authority and Tenderers who wish to be present there. The date of financial bid opening will be informed to the shortlisted bidders subsequently.

CLARIFICATION OF TENDER:

To assist in the examination, evaluation and comparison of Tender, University may at its discretion ask the Tenderers for a clarification on the Tender which is submitted by him. The request for clarification and the response shall be in writing.

University will be at liberty to involve any expert or consultant and use appropriate metrics and weightages in evaluating the bid for completing the entire bid process.

AWARD OF PURCHASE ORDER

Successful Tenderer shall be awarded the Purchase Order. If after accepting the Purchase Order, the agency fails to supply the items, EMD will be forfeited and the agency will be blacklisted, in addition to recourse to other penal measures. No grievance will be entertained in this regard.

6.1 University reserves the right to negotiate with eligible Tenderer before finalization of the Tender and/or contract.

6.2 University reserves the right at the time of award of Purchase Order to increase or decrease even obsolete the number of items without any change in terms and conditions.

6.3 The bidders must quote rates and other terms and conditions for all the equipment's/items failing which tender will be rejected. Total cost of the bid will be one of the important deciding factor while deciding the bid in favor or against any bidder.

NOTIFICATION OF AWARD

Prior to the expiration of the period of Tender validity, the University will inform the Tenderer appropriately that the Bid has been accepted and the Purchase Order has been awarded.

(Signature of Tenderer)

Official seal

PRE-QUALIFICATION CRITERIA FOR BIDDERS

1. The bidder should be a company registered under the Companies Act, 1956 or a partnership firm registered under Indian Partnership Act 1932 or Limited Liability Partnership Act 2008 with registered office in India and **in operation for at least 10 years** as on 31.03.2018.

2. The Bidder must have successfully executed:

   - **One** similar work of value not less than **Rs. One Crore**

   OR

   - **Two** similar works of value not less than **Rs. Fifty Lakhs** each

   Similar means "Supply & Installation of **Data Centre Equipment build in aspects of Electrical, Civil, IT Infrastructure equipment and Integrated Building Management System**" for any Govt. Dept. / Private Sector/ Public Sector Undertaking during the last five financial years (Copies of Purchase Orders & Successful Work Completion Certificates must be submitted).

3. The Bidder should have average annual turnover of Rs. 20 Crores or more during the last three financial years. (CA Certificate and last three years Balance Sheets must be submitted).

4. The Bidder must have positive net worth and should be a profit making company for last three financial years.

5. The Bidder must be an ISO 9001:2015 & ISO 27001:2013 certified company. (copies of valid certificates to be submitted)

6. The bidder should have manpower strength of 100 nos. employees or more on its payroll. (Bidder should submit a declaration to this effect).

7. The Bidder has not been blacklisted by Central Govt. /State Govt./PSUs/Other Govt. Agency. A declaration on company's letterhead must be submitted by Bidder.

8. The Bidder must submit Authorization Letter (MAF) from OEM's of UPS, DG Set, DCIM, SFP and Fire Alarm System for this specific Tender.

9. NSIC / MSME registered bidders must submit copies of valid NSIC / MSME Registration Certificates for exemption of EMD & Tender fee.

PURPOSE OF DOCUMENT (REQUIREMENT)

INTRODUCTION

MDU is building and revamping the IT, Civil, Electrical infrastructure in its Computer department at First floor in the admin wing of the university itself.

There is one NOC facility in the vicinity associated with the Electrical cum UPS room at the same elevation same as of Data Centre. IT services and business applications are supported from the Data Centre at 1st Floor of Building.

OBJECTIVES

Data Centre to support MDU applications and IT Services at University Complex. The area is earmarked for the Data Centre on the 1st floor of tower in the Admin Complex. The data Centre will be designed and built as modular, energy efficient, high computing Centre having scalability for future.

DATA CENTRE DESIGN CONSIDERATIONS:

The proposed Data Centre are an integrated design of physical infrastructure to give better computing uptime, scalable, safe, clean, and highly secure environment with integrated building management system for monitoring on 24x7x365 days basis. The data Centre is as per standards and efforts have been made to conform to standards of Data Centre, wherever possible. The proposed Data Centre is being created, keeping in mind the following critical factors and requirements:

SCALABILITY

All the components of the Data Centre have been designed to have scalability to provide continuous growth to meet MDU changing business requirements with respect to the changing IT computing equipment.

AVAILABILITY

All the critical components used in the physical architecture shall have multiple level of redundancy to reduce the down time to the minimum & to provide the maximum uptime to the Data Centre on 24x7x365 days basis.

MODULARITY

Most of the Components shall be modular & hot-swappable in nature, so that they can minimize the human error as well as down time due to critical faults. Modular components will help to reduce the deployment time as well as the re-deployment time in case forced to change the Data Centre location due to any kind of natural calamities.

REDUNDANCY

N+N redundancy has been considered for power & cooling.

AGILITY

Agility of the entire critical physical infrastructure has been considered while deciding the Data Centre components.

TOTAL COST OF OWNERSHIP

All the above design parameters are aimed to reduce the capital investment as well as the operating & maintenance cost of the Data Centre.

THE KEY FUNCTIONAL AREAS FOR DATA CENTRE ARE:-

- Server Room: It has an area of about 507 SFT and is designed to house 12-14 Server Racks each with IT load of 3 kVA, and 1 Network Racks each with IT load of 3 kVA. The total designed IT load of Server farm is 30 kVA (approx.).
- Network Operations Centre (NOC): A NOC of 2 seats is provided in existing Area for 24x7 operations & management of Data Centre.
- UPS Room: UPS Room is provided to install 2 modular 30 KVA +1 UPS, Mux Rack, Battery rack, etc. This is common for UPS/Mux Room.

SCOPE OF WORK

For successful implementation and smooth execution of the entire project the scope of work has been divided into three distinct phases. The Bidder shall execute the entire Scope of Work covered under on a turnkey basis. One or more than one phase can run concurrently to complete the project within the stipulated timelines. The scope of work under different phases is as given below:

PHASE-1

Supply, installation, implementation, testing, commissioning and warranty services for equipment supplied for setting up Data Centre at MDU as per the proposed design and to meet the desired objectives.

Site Preparation

Visit and study the civil & other infrastructure available on the site and perform required civil works essential for installing/implementing various Data Centre Infrastructure systems / components under the scope of this tender.

SUPPLY / CREATE

- Infrastructure comprising of civil works and interiors as per the detailed technical specifications provided in Technical specification document. The selected Bidder will only use the acceptable materials and brands and shall deploy trained & skilled manpower with good workmanship qualities to provide Class A finish which is long lasting and easily maintainable.
- Facilities Comprising of UPS, Electrical works, Life & Fire Safety Systems, Access Control, etc., as per the detailed specifications provided in Technical specification section. The selected Bidder will

follow all the safety standards, rules & regulations, OEM guidelines while implementing/creating/installing these facilities.

- The Quoted Solution should have 75 Single Mode Transceivers of Cisco make(GLC-LH-SMD=) with 3 Years Support

INSTALLATION AND INTEGRATION

The scope of installation and configuration shall mean to install and configure every component and subsystem component integrating the facility components.

ACCEPTANCE

The acceptance test shall cover the following scope

CRITERIA FOR ACCEPTANCE

The following equipment would be required to undergo respective quality acceptance tests

- UPS and battery bank
- Cooling units
- Gas based Fire suppression cylinders

USER ACCEPTANCE TESTING

The UAT shall cover 100% of the MDU Data Centre after successful testing by the Bidder. The date on which Acceptance Test Certificate is issued shall be deemed to be the date of successful commissioning

TRAINING

The Bidder shall conduct training for MDU's designated officials. Training will be provided for a batch of 3 people at MDU's premises or any other premises accepted by MDU. MDU in consultation with the Bidder shall decide the detailed scope and schedule of training program. Furthermore MDU may request any other training during O&M phase to familiarize its technical team with the operations & maintenance procedures for Data Centre. All the training material will be provided by the Bidder. The training shall cover all the systems involved in the build of the Data Centre.

WARRANTY

All the equipment supplied under this project shall carry 3 years warranty from the respective OEMs. The warranty coverage shall start after successful installation and integration of all the systems of the Data centre and the bidder shall submit the OEM warranty coverage documents. Replacement or repair of defective product/system/component shall be carried out within the defined SLA.

DOCUMENTATION

Bidder shall provide standard documentation. This documentation shall be submitted as the project undergoes various stages of implementation Indicative list of documents includes but is not limited to:

- Project commencement: Project plan to give out micro level activities with milestones and deadlines.
- Delivery of material: Factory Test Certificate (Original) from OEMs.
- Training by certified Trainer: Training material shall be provided (two hard copies), which shall include the presentations used for training and also the required relevant documents for the topics being covered.
- Process documentation: The Bidder shall be responsible for preparing process documentation related to the operation and maintenance of each component of the DC. The prepared process document shall be formally approved and signed off by MDU before commencement of UAT.

The Bidder shall be responsible for preparing documentation required for certification wherever applicable or as required by MDU. The estimated time for completion of the work is **12** to **14 weeks** from the date of placement of LOI.

All required licenses to run the solution with its offered feature set (as per RFP Specifications) should be supplied from Day 1.

Required Passive work including electrical and civil work will be done by the Bidder

The proposed Solution should have seamless integration with Existing Network Infrastructure already in placed within MDU Campus.

TERMS AND CONDITIONS

The PROCUREMENT OF VARIOUS EQUIPMENTS FOR UP-GRADATION OF DATACENTER INFRASTRUCRURE. **for MDU, Rohtak** *are required to be purchased for this University. You are requested to kindly quote your rates for the same. The terms & conditions for quoting/tendering the rates given in enclosed page may also be kept in view and signed. Your tender will interalia be subject to the following conditions: -*

1. The packing, forwarding, freight, insurance charges etc. may be quantified in terms of amount. These charges will not be payable against such vague statement as "packing, forwarding, freight and insurance charges etc. extra".
2. Charges not mentioned in the tender shall not be paid.
3. FOR shall be M.D. University, Rohtak
4. The offer/rates must be valid for a period of at least three months from the date of opening of tender.
5. The current price list duly authenticated by the Principals with dated signature and seal along with literature/pamphlets may be supplied along with the offer.
6. The quantity may increase or decrease or obsoleted without any notice. The University shall communicate the increase or decrease within 90 days of acceptance of tender.
7. The University is situated within the Municipal Limits. As such, Octroi, if any, shall be payable. In case, the material is supplied through a Transport Company by road, the Transport Company's charges, labour charges and octroi charges shall be borne by the supplier. It may be mentioned specifically as to whether the material will be sent by rail or by road through a Transport Company.
8. The goods shall be supplied by the Supplier within the time limit specified in the supply order. The delivery period can be extended by the Director UCC only in exceptional cases on written request of the Supplier giving reasons/explaining circumstances due to which delivery period could not be adhered to. **In case, the material is not supplied within the delivery period, the supplier shall be liable to pay the University the compensation amount equivalent to 1% (one percent) of the cost of material per week or such other amount as the Registrar may decide till the supply remains incomplete, provided that the total amount of compensation shall not exceed 10% (ten percent) of the total amount of the cost of material supplied.** Appeal against these orders shall, however, lie with the Vice-Chancellor, M.D. University, Rohtak whose decision shall be final.
9. In case, the supplier/contractor fails to execute the supply order/contract on the rates, and terms and conditions as contained in the supply order within the stipulated period, they shall be liable to such action as blacklisting, debarring from having any business with this University, forfeiture of earnest money/security, besides any other action as may be deemed proper by the University.
10. As a general policy, the University tries to make 100% payment within 15 days of the receipt of material subject to proper installation, wherever applicable, and satisfaction of the Inspection Committee. No advance payment or payment against documents negotiated through Bank shall be made. However, Advance payment may be made against security for imported items to avail Custom Duty Exemption.

11. The acceptance of the material shall be subject to satisfactory report of this Office's Inspection Committee/Technical Committee/Experts Committee.
12. The samples of the material, if necessary and possible, shall be supplied with the tender. The unapproved samples shall be collected on receipt of information failing which the same shall be dispatched by Goods Carrier on your risk with the condition of **"Freight to Pay"**. Samples **costing less than** Rs. 100.00 shall not be returned to the **quotes**. However, if the **quotes** wish to take the same back, it can be collected at their own cost within a period of one month, failing which the samples will be disposed off.
13. The bidder should possess minimum 3 Years' experience in direct supply, installation, testing and commissioning of similar equipment/Software's and support to the Govt./Public Sector/Reputed Institutions for a minimum of 2 orders. Proof of direct dealership details i.e. OEM authorization letter/dealership certificate for supply along with Prime Customers contact details and photocopies of Purchase Order and/or installation report, to whom the similar Products Have Been supplied by the Tenderers, is required to be submitted along with the Technical Bid.
14. The vendor will also provide complete technical and operational training with no cost and the virtual lab/class will be provided the vendor at no extra cost for R&D before and after the commencement of project for at least 2 persons one time.
15. All the features present in the devices should come with all required licences from day 1.
16. The acceptance of the tender shall rest with the undersigned who does not bind himself to accept the lowest tender and reserves the right to reject any or all items of tender without assigning any reason therefore. The undersigned also reserves the right to accept tender in part i.e. any item or any quantity and to reject it for the rest.
17. The University is registered with the Department of Scientific & Industrial Research, Ministry of Science & Technology, New Delhi in terms of Govt. Notification No. 10/97- Central Excise dated 1 March, 1997 and Notification No. 51/96-Customs dated 23.7.1996 vide Registration No. TU/V/RG-CDE (244)/2015 dated September, 1,2015 up to 31-08-2020. Thus the University is exempted from payment of Custom Duty GST is applicable at concession rate. The consignee shall issue necessary certificates duly countersigned by the Registrar, M.D. University, Rohtak to avail of exemption.
18. It may be certified that you have not been debarred/ blacklisted for any reason/period by DGS&D, DS&D (Haryana) or any other Central/State Govt. Dept./University/PSU etc. If so, particulars of the same may be furnished. Concealment of facts shall not only lead to cancellation of the supply order, but may also warrant legal action.
19. In case, any other information/clarification is required, the undersigned may be contacted at Telephone No. 01262-393548/393594 on any working day (Monday to Friday) during office hours (9 a.m. to 5.00 p.m.).
20. The successful bidder has to deposit a Performance Guarantee equal to 5% of cost of Material, in the form of FDR/Bank Guarantee/TDR for the warranty period (6 months), in the name of Finance Officer MD University Rohtak. When Performance Guarantee/warranty is deposited, EMD will be returned subsequently.
21. The Financial Bid should be accompanied with an Earnest Money Deposit (EMD) of Rs. 2% of Bid Amount rounded to the nearest ten thousand through Online using E-tender Portal. EMD of unsuccessful bidder will be returned subsequently. No interest shall be paid on EMD.

22. The Firms registered with NSIC /NSME are exempted from Tender Fee and EMD, copy of the valid certificate must be uploaded with technical cover
23. After winning the order, if the vendor fails to Deliver product and provides satisfactory Warranty, EMD will be forfeited and also the vendor will be blacklisted from participating in any future bid.
24. The Sub Committee reserves the right for negotiation thereafter if considered necessary.
25. The rates should be quoted for required specifications. The technical specification of the equipment's required must accompany the tender. The decision of the University will be final with regard equipment's to be purchased.
26. The bidders must quote rates and other terms and conditions for all the equipment/items failing which tender will be rejected. Total cost of the bid will be one of the important deciding factor while deciding the bid in favour or against any bidder.
27. University reserves the right at the time of award of Work Order to increase or decrease or even delete the number of items without any change in terms and conditions.
28. The tender should be submitted only if the material is readily available in your stock or can be supplied within 45 days after the order is placed.
29. The dispute, if any, shall be subject to the jurisdiction of Courts at Rohtak. Any other jurisdiction mentioned in the tender or invoices of the manufacturers/distributors/ dealers/suppliers etc. shall be invalid and shall have no legal sanctity.
30. Terms and conditions should Invoice or other letters of the firm, if any, shall not be binding on the University, except those mentioned specifically on the supply order, and your acceptance of the order shall be construed as your agreement to all the terms and conditions contained in the order.
31. No Consortium BID is allowed.
32. The Bidder should be doing Business in India for this particular OEM for at least last 5 years.
33. The Bidder should be a company incorporated and registered in India Under the companies Act, 1956.
34. Bidder should be ISO 9001 Certified.
35. The Warranty of equipment's will start from the day of handover of the project to MDU
36. The any time during the implementation of project any equipment/part-code is found short to complete/achieve the scope of work will be provided by the vendor free of cost to complete the project.
37. The Solution should be readily integrable with thirds party solutions such as NMS
38. The committee may wave of minor Deviations in Compliance of the Technical Specifications.

Signature _____

Name of the firm with seal/stamp _____ **M. D. University, Rohtak**

Affix Rubber Stamp of the firm

BOQ (CONSOLIDATED REQUIREMENT SHEET)

S.No.	System	Unit	Qty	Acceptable Make
1	Rodent Repellent System	Set	1	Maser/ C SYSTEM /star
2	Water Leak Detection System	Set	1	VIMPAX/C SYSTEM/STAR
3	**Access Control System**	Nos.	2	eSSL/smart i/Honeywell
4	NOVEC Gas System	Set	1	MINIMAX/SIEMENS
5	Fire Alarm System	Set	1	RAVEL/MORELY /EST
6	VESDA System	Set	1	Xtralis /Siemens/HONEYWELL
7	Fire Rated Door	Nos.	1	Navair, Shaktimet Door/ASES/KINDLE
8	Fire Retardant Paint	Sqft	2500	Asian Paints, Pacific, Firetard
9	LED Light fixture for Server room with wiring	Nos.	10	Syska, Wipro, Philips, GE/Havells
	Electrical Main input panel for PAC, UPS and Raw power	Nos.	1	CPRI approved manufacturer
10	Distribution system for DC including point wiring, Inter rack electrical cabling, DB, Industrial Sockets, Switch Sockets for point wiring for IBMS electrical distribution.	Set	1	ABB, Schneider, Siemens, L&T
11	Electrical Switchgear for Output DBs	Lot	2	ABB, Schneider, Siemens, L&T
12	PVC Conduit	Lot	1	AKG, RKG, Polycab, Precision
13	FR and LSZH cabling for UPS, panel, racks	Lot	1	Skytone, ESC, Delton, Polycab, RR Kabel/Havells
14	Air/Dust Purifier DEC	Nos.	1	Purafil/Stulz
15	UPS System	Nos.	2	Emerson/ Hitachi/ APC/Eaton
16	DCIM System for IBMS equipment/ DG set/PDU/UPS/PAC	Set	1	Schneider, Siemens, Honeywell,
17	IT Racks with containment With complete accessories	Nos.	11	Rittal/APW/APC
18	IP PDUs	Nos.	28	Rittal/Eaton/APC
19	Structured Cabling System (LSZH) Rack to rack with Fiber connectivity for 14 racks	Lot	1	AMP/commscope/molex/R&M
20	125 KVA Generator Set(With IP Remote Monitoring)	Nos.	1	Kirloskar/Jakson
21	Rack Foldable Monitoring System with trolley	Nos.	1	Avoscent
22	Mobile Work stations	Nos.	2	DELL/HP
23	Manpower support in General Shift or emergency availability	Job	1	NA

Technical Compliance Envelope

ANNEXURE – A (TECHNICAL SPECIFICATIONS)

This section describes the technical requirements of the Data Centre and the specifications of the systems/components required to fulfil the requirements.

- Technical Requirements

The DC will cater to internal IT requirements i.e. applications and users. The DC will provide an isolated high performance computing environment and network to the MDU team.

- **Data Centre:**

1. Server farm is designed in a Cold aisle configuration to accommodate 14 racks (racks @ 3 kVA per rack), and sufficient free area for ease of operating and maintaining the equipment installed in the Server farm. Initially, the server farm shall be populated with 6 to 8 nos. of new server racks.

   However, all the required infrastructure viz. power, cooling, data cabling etc. shall be provisioned for all the racks. NOC is designed to accommodate 2 people.

SCHEDULE 1: MODULAR UPS SOLUTIONS FOR DC -QTY(2)

Main Input		Compliance (Yes/No/Better)
Grid System	3 Phases + Neutral + Ground	
Rated Input Voltage	380/400/415VAC	
Rated Frequency	50/60Hz	
Input Voltage Range	304~478Vac (Line-Line),full load 228V~304Vac (Line-Line),load decrease linearly according to the min phase voltage	
Input Frequency Range	40Hz ~ 70Hz	
Input Power Factor	>0.99	
Input Current THDi	<3% (full Linear Load)	
Bypass Input		
Rated Bypass Voltage	380/400/415VAC (Line-Line)	
Rated Frequency	50/60Hz	
Bypass Voltage Range	Selectable, default -20% ~ +15% Up limited: +10%, +15%, +20%, +25% Down limited: -10%, -15%, -20%, -30%, -40%	
Bypass Frequency Range	Selectable, ±1Hz, ±3Hz, ±5Hz	

Bypass Overload	110% Long term operation 110%~125% last for more than 5min 125%~150% last for more than 1min >150% last for more than 1s	
Output		
Rated Inverter Voltage	380/400/415VAC (Line-Line)	
Rated Frequency	50/60Hz	
Output Power Factor	0.9	
Voltage precision	±2%	
Transient Response	<5% for step load (20% - 80% -20%)	
Transient recovery	< 30ms for step load (0% - 100% -0%)	
Output Voltage THDu	<1.5% from 0% to 100% linear load <6% full non-linear load according to IEC/EN62040-3	
Inverter Overload	<110%, 60min; 110%~125%,10min; 125%~150%,1min; >150%,200ms	
Frequency Regulation	50/60Hz±0.01%	
Synchronized Range	Settable, ±0.5Hz ~ ±5Hz, default ±3Hz	
Synchronized Slew Rate	Settable, 0.5Hz/S ~ 3Hz/S, default 0.5Hz/S	
Battery And Charger		
Battery Rate Voltage	±240VDC	
Charger Voltage precision	1%	
Charger Power	max=20% *Output power	
Efficiency		
Normal Operation	>96%	
Battery Operation	**>96%**	
System		
Display	LED + LCD + touch screen	
Interface	RS232, RS485, USB, Programmable dry contact, battery cold start	
Option	SNMP,AS400,parallel kit, Lightning protection components, Dust Filter, LBS	
Environmental		
Operation Temperature	0 ～ 40 ℃	
Storage Temperature	-40 ～ 70 ℃	
Relative Humidity	0 ～ 95% Non condensing	
Noise (1 meter)	65dB @ 100% load, 62dB @ 45% load	
Altitude	<1000m, Load derated 1% per 100m From 1000 ～ 2000m	

SCHEDULE 2: ELECTRICAL SYSTEM & PANEL

The electrical system is the backbone of the DC; bidder shall ensure that the electrical system does not have any single point of failure in terms of component or delivery path along and should be able withstand any probable Phase anomaly.
Electrical meters shall be 'intelligent' type to enable their integration and monitoring by DCIM.

The technical specifications of the electrical system are given below.

SCHEDULE 2.1: ELECTRICAL CABLES

S.No.	Equipment Specification	Compliance (Yes/No/Better)
1	Cables & Conduits: The Bidder shall install, terminate and connect up all cable and conduits as per drawings and cable schedule.	
1.01	Al Cables shall be FR (Fire Retardant) type.	
1.02	The drawings shall be strictly followed except where obvious interference occurs. In such cases, the routing shall be changed as directed and / or approved by the Engineer In Charge.	
1.03	Approximate lengths of cable and conduit runs are given in the cable schedule for guidance & evaluation purposes only. Before commencement of work, the Bidder shall take actual measurements and prepare his own cable schedule to reduce wastage to a minimum.	
1.04	Conduit shall be used only in short lengths in certain areas where required and / or as directed by the Engineer In Charge.	
1.05	Conduits shall be PVC type in general. However, rigid type steel conduit, if required, shall also be supplied by the Bidder.	
2	Cable Laying: Cable shall generally be installed in ladder type; site fabricated / pre-fabricated trays except for some short run in rigid / flexible conduit for protection or crossing.	
2.01	Cables lay on trays and risers shall be neatly dressed and clamped at an interval of 1500 mm and 900 mm for horizontal and vertical cable runs.	
2.02	All power cables shall be clamped individually and control cables shall be clamped in groups of three or four cables.	
2.03	Also the cable runs both before and after the fire seals shall be suitably sprayed with anti-fire propagation liquid at least for 1M length.	
3	Cable Tag & Marker: Each cable shall be tagged with numbers that appear in the cable schedule.	
3.01	Cables shall be tagged at entrance and exit from any equipment and junction box.	

3.02	The location of cable joints, if any, shall be clearly indicated with cable marker with an inscription 'cable-joint'.	
4	Cable Termination: The termination and connection of cables shall be done strictly in accordance with manufacturer's instruction, drawings and /or as directed by the Engineer In Charge.	
4.01	The work shall include all clamping, fitting, fixing, cable jointing, crimping, shorting and grounding etc. as required for heat / cold shrinking technology for the complete job.	
4.02	All equipment required for all such operations and furnishing of all consumable materials, such as soldering material, electrical tape, sealing material as well as cable jointing kits shall be included in the offer.	

SCHEDULE 2.2: ELECTRICAL PANELS FOR DATA CENTER DISTRIBUTION

S.No.	Equipment Specification	Compliance (Yes/No/Better)
1	All the Panels shall be of extendible type and shall be suitable for operation on 3 phases, 4 wire, 415 Volts, 50 cycles, neutral grounded at transformer and short circuit level not less than 33 MVA at 415 volts.	
2	The DC Panel shall comply with the latest edition of relevant Indian Standards and Indian Electricity Rules and Regulations.	
3	All Panels and Distribution Boards shall be fabricated by using specified components as per the specifications given below.	
4	The Panels shall be metal enclosed sheet steel cubical, indoor, dead front, and floor mounting type.	
5	All doors and covers shall be fully gasket with foam rubber and / or rubber strips and shall be lockable.	
6	All MS sheet steel used in the construction of panels shall be 2mm thick and shall be cut to different sizes and bolted as necessary to provide a rigid support for all components.	
7	All covers shall be properly fitted and square with the frame, and holes in the panel correctly positioned.	
8	Fixing screws shall enter into holes tapped into an adequate thickness of metal or provided with hank nuts. Self-threading screws shall not be used in the construction of panels.	

SCHEDULE 3: EARTHING

Earth pits are required to avoid the hazard of electric shock by keeping the exposed conductive surfaces of a device at earth potential. It is required that separate earth pits be constructed for separate type of devices i.e. electrical, cooling, IT, security etc.

The technical specifications of earth pits are given below.

S.No.	Equipment Specification	Compliance (Yes/No/Better)
1	All the non-current carrying grid parts of the electrical installation and mechanical equipment shall be earthed.	
2	Earthing system shall be in accordance with TIA/IEC Code of Practice for Earthing.	
3	The resistance from any part of the lightning protection system to earth shall be less than 4 ohm.	

SCHEDULE 4: DG(DIESEL GENERATOR WITH AMF PANEL)

S.No.	Equipment Specification	Compliance (Yes/No/Better)
1	Supply, installation, testing & commissioning of DG Sets of capacity 125 KVA Prime rated with all required accessories, SNMP card, Aux Card, Control Cables, Shielded cables, DG set should be able to show the fuel Levels and the genset should be able to show approximate capacity as per fuel service/critical part failure alarm etc.	
2	DG Exhaust Pipe with all accessories, Cladding, Structure, Earthing connections, CIVIL Foundation suitable for DG dynamic Load, as per site conditions., Warranty Includes as per OEM standards for 3 years	

SCHEDULE 5: IT RACKS & COLD AIR CONTAINMENT

S. No.	Equipment Specification	Compliance (Yes/No/Better)
1	Frame: Rack shall be of symmetrical frame construction of rolled 9-fold vertical hollow sections with integral system punching on a 25 mm DIN pitch pattern. 600W x 2000H x 1200D, Top cover with 4 x cutout of Dia 112, 2 x cutout of Dia 112 for cable entry. Bottom cover with 4 x cutout of Dia 112 for cable entry. All cutouts blanked with Plastic caps. 2 pairs, 42 U 19" L type angle, Front & Rear, on Vertical Cable Trough (LH & RH)2 Pair,.	
	Frame: Rack shall be of symmetrical frame construction of rolled 9-fold vertical hollow sections with integral system punching on a 25 mm DIN pitch pattern. , 800W x 2000H x 1200D, Top cover with 4 x cutout of Dia 112, 2 x cutout of Dia 112 for cable entry. Bottom cover with 4 x cutout of Dia 112 for cable entry. All cutouts blanked with Plastic caps. 2 pairs, 42 U 19" L type angle, Front & Rear, on Vertical Cable Trough (LH & RH)2 Pair, on 6 punched section. Color: RAL 9005	
2	Set of side Panel 2000H X 1200D Screw Fixed, unvented	
3	Sheet steel perforated door, 2000H x 600W or 800 W	
4	Metal Shunting Rings-90mm x 60mm (pack of 10)	
5	Castor Wheels With Brake (2No) Heavy Duty	
6	Castor Wheels Without Brake (2No)	
7	Captive hardware (pack of 20).	
8	Levelling Feet (Pack of 4)	
9	Blanking Panel 1 U, Black	
10	Ergoform handle	
11	Vertical Cable Managers	
12	Horizontal Cable Managers	

SCHEDULE 5.1 : RACK FOLDABLE MONITOR

S. No.	Equipment Specification	Compliance (Yes/No/Better)
1	1 U Rack Mount	
2	Foldable	
3	Display size: 17 inches diagonal	
4	Contrast Ratio: 700:1	
5	Display colours: 16 million	
6	Resolution: FULL HD or Higher	
7	Brightness: minimum 300 nit	
8	USB based inputs	
9	Backlit Keyboard	

SCHEDULE 6 : PDU'S

S. No.	Equipment Specification	Compliance (Yes/No/Better)
1	Meter monitor PDU receptacles provide remote on and off functionality to allow for power cycling and to help prevent unintended overloading	
2	Monitored power draw at the receptacle level	
3	Graphical LCD should show input current of each phase enabling Intuitive load balancing	
4	Detailed data-logging for statistical analysis and diagnostics	
5	Comprehensive power management and flexible configuration through a web browser, NMS, Telnet, SNMP, or HyperTerminal (console)	
6	Should support both C13-20& C19-4	
7	Supply power to 24 receptacles	
8	Onboard web interface for remote management	
9	Organizes power distribution and simplifies cable management	
10	32-amp circuit breakers protect against overload conditions	
11	Flash upgradeable for quick and easy upgrades	
12	18 to 20 Nos of C13 & 4 no C19 Power cables per PDU in any two different colour..	

SCHEDULE 7: FIRE RATED DOORS

Fire rated doors shall be provided in server farm and UPS room to provide a completely sealed fire retardant space.

The technical specifications of fire rated doors are given below:

S. No.	Equipment Specification	Compliance (Yes/No/Better)
1	Fire door shall be of 35mm or above thickness and shall have a 120 minutes fire rating.	
2	Fire door shall be fabricated with galvanized sheet with infill of fire rated insulation filler on both faces of sheet with lock seam joints at stile edges and internal reinforcement at top, bottom and stile edges for fire rating.	
3	The door frames shall be manufactured from 1.6mm thick galvanized steel sheet pressed form to double rebate profile of size 100 x 50 mm (nominal).	
4	The door frames and door shutters shall be primed with etch primer.	
5	The shutter shall be mounted with SS ball bearing hinges of size 125 x 75 x 3 mm (4 no. per leaf).	

6	Door Closer: Fire door shall have UL listed, fire rated, heavy duty door closers.	
7	Handle: Fire door shall have stainless steel D type pull handle with rose and necessary screw as required.	

SCHEDULE 8: GRID BASED FALSE CEILING

False ceiling shall be provided in all the areas of Data Centre to give an aesthetically good look and a void to run services.
The technical specifications of the grid based false ceiling are given below:

S. No.	Equipment Specification	Compliance (Yes/No/Better)
1	Providing and fixing metal false ceiling with powder coated 0.5mm thk hot dipped galvanised steel tiles 595 x 595 mm with tegular edge (10mm) suitable for 25mm grid supported on suitable powder coated galvanized steel grid as per manufacturer specification.	
	The rates shall be inclusive of cut-outs for lighting, AC grills, Fire detectors, nozzles with complete or equivalent	

SCHEDULE 9: PAINTING

All Data Centre areas shall be painted with approved shades of paints.

The technical specifications of paints are given below:

S.No.	Equipment Specification	Compliance (Yes/No/Better)
1	All Painting on masonry or concrete surface shall preferably be applied by roller. If applied by brush than same shall be finished off with roller	
2	Minimum three finishing coats of paint shall be applied over a coat of primer.	
3	All plastered areas above false ceiling shall be provided with two or more coats of white wash.	
4	Server farm and UPS room shall be painted with two coats of fire resistant transparent paint.	

SCHEDULE 10: DATA CENTER SECURITY SYSTEM

SCHEDULE 10.1 : WATER LEAK DETECTION SYSTEM

Water leak detection system shall be installed in the Server farm and in the vicinity of the office cooling unit to detect and raise alarm regarding presence of water.

The technical specifications of water leak detection system are given below

S.No.	Equipment Specification	Compliance
1	Water Leak Detection (WLD) system shall comprise of Cable sensors, Water leak detection modules, I/O modules and sounders all connected to a control panel.	
2	WLD system shall report events on LCD / LED display with full English language description of the nature of the fault in the panel.	
3	The control panel shall have 8 zones and the same shall be expandable up to 32 zones.	
4	The system shall be programmed, armed or disarmed through a control key pad.	
5	The control key pad shall have a 32 character LCD display for viewing various events.	
6	The system shall able to support 4 keypads and all the modules shall be connected through a 2 core cable.	
7	WLD system shall have the capability to segregate the premises shall be divided into specific zones such that any zone shall be isolated by the user if required.	
8	WLD system shall be totally tamper proof and shall activate an alarm if the control panel is opened, the sensors are tampered with or if the system cables are cut even in the disarmed state.	
9	WLD system shall log maximum events and shall have inbuilt mechanism to connect to a printer to printing reports.	
10	WLD system shall have one serial interface to connect to DCIM .	
11	WLD system shall be able to operate on 230VAC @ 50 Hz	
12	WLD system shall have a response time of minimum second, after exposure	
13	WLD system shall be able to operate within the temperature range of -10 to 50 degree C.	
14	WLD system shall be able to operate on 230VAC @ 50 Hz	

15	Water Leak Detection Module: WLD module shall be a single zone type. The module shall be resistant to oxidation and erosion. The module shall have relay output for connection to the controller. LED alarm indication shall also be provided. The detectors shall operate in AC or DC supply.	
15.01	The module shall be resistant to oxidation and erosion.	
15.02	The module shall have relay output for connection to the controller.	
15.03	The module shall have LED alarm indication.	
15.04	The detectors shall be able to operate on AC or DC supply.	
16	Cable Sensors: Cable sensors for use with water leak alarm module, where netting is not required as sensing wire is bound tightly within the two core carrier cable. It should be used on runs with lots of turns. Cable sensor shall be 5 mtrs, 10 mtrs, 15 mtrs, 20 mtrs and 25 mtrs type	
17	Sounder: The sounder shall give audible alarm when any sensor operates.	
17.01	The sounder shall be complete with electronic oscillations, magnetic coil (sound coil) and accessories ready for mounting (fixing).	
17.02	The sounder shall have an output of more than 85 decibels at the source point.	

SCHEDULE 10.2 A) : FIRE SUPPRESSION SYSTEM & DETECTION SYSTEM

Clean agent based fire suppression system shall be installed in the server farm to suppress any outbreak of fire. This system shall be integrated with the fire panel.

The technical specifications of clean agent fire suppression system are given below:

S.No.	Equipment Specification	Compliance (Yes/No/Better)
1	NOVEC 1230 shall be used as fire suppressant.	
2	Clean Agent and design of Fire protection system for computer rooms should follow the Standard on “Clean Agent Extinguishing systems NFPA Standard 2001 (Edition 2004) including its safety guidelines with respect to	

	"Hazards to Personnel", electrical clearance and environmental factors in line with environmental considerations of Kyoto Protocol.	
3	The clean agent shall also comply with the requirements of the "Ozone Depletion Substances Regulation & Control Rules 2000, Ministry of Environment & Forests, and Government of India.	
4	The Protection System shall broadly consists of container, feed lines, ring mains / laterals as required, spray nozzles, signalling equipment and cables, heat / smoke detection and activation devices.	
5	All the components of the system shall be capable of withstanding heat of fire and severe weather conditions.	
6	The clean agent shall have Zero Ozone Depleting Potential.	
7	The clean agent shall have Global Warming Potential not exceeding one.	
8	The clean agent shall have Atmospheric Lifetime not exceeding one week.	
9	For safety reasons the clean agent fire suppression system cylinder, valve, discharge hose, nozzles, fire detection detectors and panels etc. must be provided from the same manufacturer to ensure proper performance as a system with UL / FM approvals, thereby giving a confidence that a third party has tested the performance of the whole unit as a system.	
10	Clean Agent System shall preferably be a low pressure system. It shall be possible to carry out refilling of the clean agent cylinder at site location.	
11	System offered shall have 10 year Environmental Warranty from the manufacturer for replacing the complete system if found environmentally unsuitable during this period.	
12	The system shall provide a minimum design concentration of 4.7% by volume for Class A hazards and a minimum of 5.85% by volume for Class B hazards in all areas and / or protected spaces, at the minimum anticipated temperature within the protected area.	
13	The system shall be actuated by detection of at least two Multi Criteria Detectors, in both the room, under floor and above ceiling protected spaces.	
14	System Operation: Actuation of one (1) detector, within the system shall	

14.01	Illuminate the "ALARM" lamp on the control panel face.	
14.02	Energize horn / strobe.	
14.03	Transfer auxiliary contacts, which can perform auxiliary system functions such as operate door holder / closures on access doors, transmit a signal to a fire alarm system, shutdown HVAC equipment.	
14.04	Actuation of a 2nd detector, within the system shall	
a	Illuminate the "PRE-DISCHARGE" lamp on the control-panel face.	
b	Energize a pre-discharge horn / strobe device.	
C	Start time-delay sequence (not to exceed 90 seconds).	
d	System abort sequence is enabled at this time.	
14.05	The system shall also be capable of being actuated by manual discharge devices located at each hazard exit. Operation of a manual device shall duplicate the sequence description above except that the time delays and abort functions shall be bypassed. The manual discharge station shall be of the electrical actuation type and shall be supervised at the main control panel.	
15	System Design: The systems shall be designed to extinguish the fire with a minimum concentration of 4.7% at 210 C within 10 seconds.	
15.01	The charging pressure of the clean agent in the cylinder at 210 C shall be 42/50 bar.	
15.02	The system engineering company shall carry out the piping Isometric design and validate the same with a hydraulic flow calculation generated by using the UL approved software. The appropriate fill density shall be arrived at based on the same.	
15.03	The design & calculation shall be checked & certified by manufacturer / manufacturer trained design engineer.	
15.04	Plans and calculations shall be approved prior to installation.	
15.05	All devices and equipment shall be U.L. Listed / FM approved	
16	Clean Agent Cylinders: The clean agent shall be stored in Clean Agent storage tanks. Tanks shall be super-pressurized with dry nitrogen to an operating pressure of 360 psi @ 70 °F (24.8 bars at 21 °C). Tanks shall conform to NFPA 2001.	

16.01	Tanks shall be actuated by either a resettable electric actuator or by manual actuator.	
16.02	Tanks shall have a pressure relief provision that automatically operates before the internal nominal pressure exceeds 730 psi (50 bars).	
16.03	Each tank shall have a pressure gauge and low pressure switch to provide visual and electrical supervision of the container pressure.	
16.04	The low-pressure switch shall be wired to the control panel to provide audible and visual "Trouble" alarms in the event the container pressure drops below 290 psi (20 bars).	
16.05	The pressure gauge shall be color coded to provide an easy, visual indication of container pressure.	
17	Piping & Nozzle: Distribution piping and fittings shall be installed in accordance with the manufacturer's requirements, NFPA 2001, and approved piping standards and guidelines.	
17.01	All distribution piping shall be installed by qualified individuals using accepted practices and quality procedures.	
17.02	All piping shall be adequately supported and anchored at all directional changes and nozzle locations.	
17.03	All piping shall be reamed, blown clear and swabbed with suitable solvents to remove burrs, mill varnish and cutting oils before assembly.	
17.04	All pipe threads shall be sealed with Teflon tape pipe sealant applied to the male thread only. Alternatively pipe fittings are to be welded to the pipe as required.	
17.05	Engineered discharge nozzles shall be provided within the manufacturer's guidelines to distribute the clean agent throughout the protected spaces.	
17.06	The nozzles shall be designed to provide proper agent quantity and distribution.	
17.07	Nozzles shall be available in 1/2 in. through 2 in. pipe sizes. Each size shall be available in 180° and 360° distribution patterns.	
18	Suppression Agent: The fire suppression agent shall be Fire Protection Fluid manufactured as per UL / FM standards and as per Kyoto Protocol.	
18.01	Agent shall not contain any Hydro fluoro carbons (HFC) / Per fluoro carbons (PFCs).	

19	Release Switch: The electric manual release shall be a dual action device which provides a means of manually discharging the suppression system when used in conjunction with the detection system.	
19.01	Manual release shall be located at each exit from the protected hazard	
20	Abort Switch: The abort station shall be "Dead Man" type and shall be located next to each manual release.	
20.01	The abort station shall be supervised and shall indicate a trouble condition at the control panel, if depressed, and no alarm condition exists	

SCHEDULE 10.2 A) FIRE DETECTION SYSTEM

Fire detection system shall be installed in all the areas and all the voids to detect fire incident and to take appropriate actions to prevent its outbreak to unaffected areas and to suppress fire. The fire panel shall be integrated with Fire suppression system.

- The technical specifications of fire detection system are given below.

S.No.	Item Description	Compliance (Yes/No/Better)
1	Semi Addressable or conventional Fire Alarm Panel with LCD display with communication port for DCIM and synchronizing with Gas Suppression. The fire alarm control panel shall be microprocessor based using the multiple microprocessors throughout the system providing rapid processing of smoke detector and other initiation device information to control system output functions.	
2	The smoke detector shall be an intelligent digital photoelectric detector with a programmable heat detector. Detectors shall be listed for use as open area protective coverage and shall be insensitive to air velocity changes.	
3	The manual station shall be equipped with terminal strip and pressure style screw terminals for the connection of field wiring	
4	The strobe light taps shall be adjustable.	
5	Fault Isolator Module	
6	Response Indicator	
7	2 Core 1.5 sq. mm FR Armoured cable	
8	Providing and fixing of Conduit	

SCHEDULE 10.3 : VESDA

VESDA system shall be installed in the server farm to provide a very early notification regarding fire thus allowing operations team a bigger time window to check the incident and take appropriate actions.
The technical specifications of VESDA system are given below:

S.No.	Equipment Specification	Compliance
1	The installation of the VESDA system shall comply to one or more of the following codes and standards	
2	NFPA Standard, USA	
3	The VESDA system shall consist of a highly sensitive LASER-based smoke detector, aspirator and filter.	
4	The VESDA system shall have a display featuring LED and Reset / Isolate button.	
5	The VESDA system shall be configured by a programmer that is integral to the system.	
6	The system shall allow programming of	
6.01	Multiple Smoke Threshold Alarm levels,	
6.02	Time Delays,	
6.03	Faults including airflow, Detector, Power, Filter Block and Network as well as an indication of the urgency of the fault.	
6.04	Configurable relay outputs for remote indication of Alarm and Fault conditions.	
7	The VESDA system shall consist of an air sampling pipe network to transport air to the detection system, supported by calculations from a FM approved computer-based design modeling tool.	
8	Maximum transport time shall not exceed up to 90 seconds.	
9	Equipment shall include a high level interface with the fire alarm system & DCIM and with a dedicated System Management graphics package.	
10	The VESDA system shall provide very early smoke detection and provide multiple output levels corresponding to Alert, Action, and Fire 1 & 2. These levels shall be programmable and shall be able to set sensitivities ranging from 0.005 – 20% obscuration / meter.	

11	The VESDA system shall report any fault on the unit by using configurable fault output relays or via the graphics software.	
12	The VESDA system shall monitor for filter contamination automatically.	
13	The VESDA system shall incorporate a flow sensor in each pipe and provide staged airflow faults.	
14	The VESDA system shall have a clean air supply to maintain laser chamber cleanliness all the time.	
15	The laser detection chamber of the VESDA system shall be of mass light scattering type and capable of detecting a wide range of smoke particle types of varying size. A particle counting method shall be employed for the purposes of	
15.01	Preventing large particles from affecting the true smoke reading.	
15.02	Monitoring contamination of the filter (dust & dirt etc.) and to notify automatically when maintenance is required.	
16	The laser detection chamber shall incorporate a separate secondary clean air feed from the filter to provide clean air barriers across critical detector optics to eliminate internal detector contamination.	
17	The detector shall not use adaptive algorithms to adjust the sensitivity from the set during commissioning. A learning tool shall be provided to ensure the best selection of appropriate alarm thresholds during the commissioning process.	

SCHEDULE 10.4 : RODENT REPELLENT SYSTEM

Rodent repellent system shall be provided in the Server farm to keep rodents away. The technical specifications of rodent repellent system are given below:

S.No.	Equipment Specification	Compliance
1	Rodent Repellent System	
1.01	VHFO system shall transmit high frequency sound waves (above the 20 KHZ frequency) which are inaudible and harmless to humans but audible and painful to pests thus driving them away.	
1.02	VHFO system shall consist of one Master Console and twelve Satellites / Transducers.	
2	Satellite	
2.01	Satellite shall cover an open floor area of approximately 300 Sft	

2.02	Satellite shall cover false ceiling area of approximately 150 Sft	
2.03	Nature of sound waves: The sound waves propagated shall be linear sine waves with constantly varying frequencies	
2.04	Operating environment: Range of –4 deg C to 60 deg C, 100 % humid environment	
2.05	Power supply: 5A Power Socket (230 V AC) shall be provided for each VHFO.	
2.06	Operating frequency: Above 20 KHz (Variable)	
2.07	Sound output: 80 dB to 110 dB at 1 Mtr	
2.08	Power output: 800 MW per Satellite	
2.09	Power consumption: 15 Watt	
2.1	Power supply: 230 V AC, 50 Hz	
2.11	Mounting: Wall / Table	

SCHEDULE 10.5 : ACCESS CONTROL SYSTEM & BIOMETRICS SYSTEM

A biometric hand scanner shall be installed at the entrance of Server farm and NOC room to enforce access control policies. The access control system shall be integrated with DCIM for monitoring and Fire panel to disable the door contacts in case of a fire incident.

The technical specifications of the access control system are given below:

S. No	Equipment Specifications	Compliance
1	The biometric reader shall have the feature to update the original template automatically during verification of the identity of the respective individual with the current physical changes in the hand of the respective individual.	
2	The biometric reader shall have an ID Number length in the range of 1 to 10 digits from keypad.	
3	The biometric reader shall interface with the BMS via TCP/IP protocol.	
4	The biometric reader shall have anti-microbial coating for the hygiene of users.	
5	Electromagnetic Locks with door magnetic contact (600 lbs) UL listed for Double leaf doors complete as per specifications	
6	The biometric reader shall have an on-board controller for standalone operation and shall also be network capable	
7	Access Management software with required PC machine	
8	The biometric reader shall be designed on "Open Architecture Platform" so that the reader can be interfaced to a 3rd party access control panel if required.	

SCHEDULE 11: AIR PURIFIER

S. No	Equipment Specifications	Compliance
1	Automation Society's ISA-S71.04-2013. Painted 14 gauge cold rolled steel construction Full charge of granular media or filters manufactured Direct Drive Fan Integral balancing damper 0.2 IWG external static (saturated filters) Particulate filter	

SCHEDULE 12 : DCIM (DATA CENTER INFRASTRUCTURE MANAGEMENT)

Data Center infrastructure management shall be a unified system having capability to integrate with disparate systems irrespective of make or model. It shall be implemented for the monitoring and management of different systems of the Date Centre to provide a centralized monitoring and management platform.

The technical specifications of the DCIM are given below:

S.No.	Equipment Specification	Compliance
1	DCIM shall support the leading open standards such as BACnet, Canbus, Lonworks, Profibus, Modbus, TCP/IP, Modbus, RS485, Rs232.	
2	DCIM shall provide centralized dashboard for all the systems implemented in the DC.	
3	DCIM shall be open to integration with present and future systems with minimal change in the existing system setup.	
4	DCIM shall be future ready for integration with IP / SNMP based systems or also included all SNMP CARD and convertor as per site requirement	
5	DCIM shall provide a consolidated monitoring and management environment for components installed in physically separate locations.	
6	DCIM shall have High Availability mode.	
7	DCIM shall have a self-check mechanism to monitor its own performance continuously and alert on degradation.	
8	DCIM shall inbuilt mechanism to send notification through Web Portal, SMS and email.	

9	DCIM shall have inbuilt mechanism to send SMS alert in case of network failure or equipment fault.	
10	DCIM shall have inbuilt mechanism to set up an escalation matrix. The escalation shall be via Email and SMS.	
11	DCIM shall have inbuilt mechanism to store monitored performance data of each parameter for 1 year.	
12	DCIM shall have inbuilt mechanism to generate automated Email and SMS alerts on breach of threshold settings.	
13	DCIM shall have inbuilt mechanism to enable data backup of the performance data at user definable time intervals.	
14	DCIM shall have inbuilt mechanism to provide an integrated Dashboard for all the systems.	
15	DCIM shall have inbuilt mechanism to generate standard and customized reports.	
16	DCIM shall have a centralized dashboard which shall provide a monitoring window using the actual view of the DC. It shall show where the different devices of DCIM are placed to aid in quick identification of the fault area in case of alarm generation.	
17	DCIM shall continuously monitor the quality of power supplied by the Electricity board and the generators.	
18	DCIM shall inbuilt mechanism to set up thresholds on each monitored parameter or applicable .	
19	DCIM shall have configurable polling interval for each monitored parameter.	
20	DCIM shall continuously provide performance data of the critical statistics of the HVAC system like the Inlet temperature, Return temperature, Air flow etc.	
21	DCIM shall present the environmental conditions in terms of temperature and humidity on the same dashboard as the operational parameters of the HVAC.	
22	DCIM shall provide fault generation and resolution reports to enable the customer to assess the vendor service on regular basis.	
23	DCIM shall continuously monitor the following UPS parameters	

24	DCIM shall provide alarms generated by the access control systems on the centralized management console and also provide reports of access granted or denied.	
25	DCIM shall provide live monitoring of the cameras and also map it on the DC drawing per their installation location.	
26	DCIM shall monitor the health of the servers and other components installed for the collection of video feed.	
27	DCIM shall integrate with any make and model of cameras and access control system on standard interfaces.	
28	DCIM shall integrate with the fire alarm system and provide the alarms generated by the system on the centralized Dashboard	
29	DCIM shall be configured to set up control mechanism in case of fire alarm is activated. Some of the actions which might have to be enabled by the DCIM tool are referred below:	
30	Activation of hooter / flasher at different locations	
31	Deactivation of the access control doors, especially on the evacuation route.	
32	Switching OFF of some of the key components such as HVAC units, Power supply etc.	
33	Sending automated notification to pre-identified stakeholders.	
34	DCIM shall provide the reports for all related items.	

SCHEDULE 13: CABLE ROUTING SYSTEM

Cable routing system shall be used to provide a pathway, overhead or under floor, for cables of electrical, network and security systems.
The technical specifications of the cable routing system are given below:

S.No.	Equipment Specification	Compliance
1	Overhead Cable Routing System	
2	The overhead cable tray routing system shall consist of pathway sections, splice connectors, sidewalls, waterfalls, mounting brackets, and	

	accessories designed to route and manage copper, fiber optic, or power cables.	
3	Classified for their suitability for use as Equipment Grounding Conductor.	
4	Wire basket shall have all rounded edges	
5	Wire basket shall not require cutting or deburring of sharp edges	
6	Wire basket shall be made from pre-galvanized steel wire	
7	Wire basket system shall provide secure mounting point on three sides of the pedestal for all basket sections and an electrical bond to the pedestal.	

SCHEDULE 14 MANPOWER REQUIREMENT AND NOC FURNITURE.

Given below is an indicative list of resources required for Data Centre Operation Manpower support, However, Bidder has to ensure the suitability and adequacy of required resources at site.

S.No.	Resource	Experience & Certification(s)
1	**Provision of Maintenance and Day to Day Operation of Access Control Systems, Water Leak Detection Systems, Fire Detection, Fire Control Mechanism, DG set, Electrical dist. Systems and Rodent Repellent Systems in Data Centre at MDU Rohtak.**	3 years data Center Operation and infra Exp.
2	**Mobile workstation for 2 person with table, chair and cabinet.**	

SCHEDULE 15: STRUCTURED CABLING FOR RACK TO RACK (OFC AND COPPER FOR NEW AND EXISTING RACKS)

Structured cabling system shall be provided for inter rack connectivity and for providing a LAN and fibre to users.

The technical specifications of the structured cabling system are given below:

S.No	Equipment Specification	Compliance
1	One panel CAT6 UTP and one LIU OFC system in Each Rack	

2	CAT6 UTP and OFC system shall be independently verified and guaranteed by Intertek (ETL) to meet TIA permanent link,	
3	CAT6 UTP and OFC system shall guarantee an Network performance	
4	CAT6 UTP OFC system shall undergo compensation that enhances permanent link and channel margin performance	
5	CAT6A UTP system shall be backward compatible with CAT 6, 5e, and 5 systems and must provide a seamless migration path to 10GBASE-T performance.	
6	CAT6 UTP cable	
7	CAT6 UTP cable shall be a 4 Pair Cable, 23-24 AWG, copper with integral cross-member pair separator for uniform characteristic impedance.	
8	CAT6 UTP cable shall be from ISO 9001 certified quality manufacturer	
9	CAT6 Patch Panel	
10	CAT6 Patch Panel shall be 24 ports 1U, angular, loaded patch panel.	
11	CAT6 Patch Panel shall have IDC Connectivity at rear end & RJ-45 jack on front panel and shall be 19" rack mountable.	
12	CAT6 Patch Panel shall confirm or exceed TIA/EIA-568-B.2-1 and ROHS Compliant standards requirements for CAT6 Patch panel.	
13	CAT6 Patch Panel shall be manufactured from 16 gauge steel, painted black	
14	CAT6 Patch Panel shall confirm to EIA/TIA 568 B wiring pattern.	
15	CAT6 UTP Information Outlets	
16	CAT6 UTP Information Outlets shall have mechanism to suppress AXT.	
17	CAT6 UTP Information Outlets shall meet or exceed the requirements for channel per TIA 568-B.2-10, shall be cULus Listed, and shall be NOM and ACA compliant.	
18	CAT6 UTP Information Outlets shall have high-impact, fire-retardant plastic rated UL 94V-0.	
19	CAT6 UTP Information Outlets shall be compliant with FCC Part 68; UL Listed; and independently verified.	
20	CAT6 UTP Information Outlets terminations shall use 110-type insulation displacement connectors (IDC).	
21	CAT6 UTP Information Outlets shall accommodate installation color codes for T568A and T568B wiring schemes.	

22	CAT6 UTP Information Outlets shall include an alien crosstalk attenuation cover (Cone of Silence) to protect the termination field from induced noise from adjacent connectors.	
23	CAT6 UTP Information Outlets shall be configured in a 180° configuration such that the punch down field is in the back, allowing for rear termination.	
24	CAT6 UTP Information Outlets shall be high quality, copper based alloy, plated with 50 micro inches of gold for lowest contact resistance and maximum life.	
25	CAT6 UTP Information Outlets shall exceed all channel performance requirements in TIA-568-B.2-10 from 1 MHz to 500MHz to support the IEEE 802.an standard for 10 Gigabit Ethernet over UTP Cable.	
26	CAT6 UTP Information Outlets shall qualify for the 25 Year Extended Product Warranty and Applications Assurance.	
27	CAT6 Patch Cord	
28	CAT6 Patch Cord shall confirm to or exceed TIA/EIA-568-B.2-1standards as well as Class E requirements described in ISO/IEC 11801-B for CAT6A.	
27	CAT6 Patch Cord shall have factory fitted patch cord RJ-45 plugs at both ends.	
29	CAT6 Patch Cord shall be tested for return losses.	
30	All plastics used in construction of the connector bodies of the CAT6 Patch Cord shall be fire retardant with a UL flammability rating of 94V-0.	
31	All required UTP and Fiber Patch Cords, Connectors, Power Cables and other passive accessories for Rack to Rack connectivity will be billed as per actual.	

SCHEDULE 16: MOBILE WORKSTATIONS

Mobile Workstations will be used to trouble shoot/diagnose Datacentre faults

The technical specifications of the same are given below:

S.No	Equipment Specification	Compliance
1	Intel® Core™ Processor i7-8850H, 6 Core, 9M Cache, 2.60GHz up to 4.3GHz Turbo, 45W, vPro	
2	Ubuntu 16.04 SP1	
3	Intel Mobile CM246	
4	2 DIMM slots: 32GB DDR4 2666MHz	
5	NVIDIA Quadro P1000 w/ 4GB GDDR5 dedicated memory	
6	15.6" Ultra-Sharp TM UHD IGZO4 (3840x2160) Touch Wide View LED-backlit with Premium Panel Guarantee (100% Minimum Adobe color gamut)	
7	Support for two storage devices: one M.2 PCIe 512 GB NVMe solid state drive and one 2.5" 1 TB HDD drive:	
8	Wired: Type C to Ethernet adapter included Wireless LAN: Intel Dual Band Wireless AC 9260 802.11ac MU-MIMO 2x2 + Bluetooth 5.0 vPro	
9	Dual integrated high quality speakers and dual integrated noise cancelling digital array microphones standard MaxxAudio® Pro by Waves Integrated light sensitive HD video webcam	
10	2 x USB 3.1 Gen 1 Ports w/Powershare, Thunderbolt 3 type C port, SD Card reader, HDMI port 2.0, Headphone jack, FPR optional,Type C to Ethernet dongle	
11	Width X = 14.06" (357.23mm) Depth Y = 9.27" (235.47mm) Height Z = front 0.45" (11.48mm) – rear 0.66" (16.82mm)	
12	56Whr Lithium Ion polymer battery	
13	Type C Docking Kit for Laptop	

TECHNICAL ENVELOPE

List of Technical Documents:				
Sr. No.	**Description**	**Bidders Response (Yes/No)**	**Page no**	**Remarks**
1.	ISO 9001 and ISO 27001 Certified Copies			
2.	Registration proof of incorporation in companies act			
3.	Copy of PAN Card			
4.	Copy of latest Income Tax Return (last Three years)			
5.	Prime Customers Details			
6.	Online Receipts of Payment			
7.	Declaration of validity of rates			
8.	OEM Authorization Letter/ MAF's			
9.	Product Brochures/technical Compliances Sheet as per Annexure A(Only Color Print out may be uploaded)			
10.	Certificate of not Debarred/blacklisted			
11.	Proof of Turnover for last 3 years			

NOTE:

All the Technical Documents should be uploaded on the e-tender portal. The non-submission/poor management of documents may lead to disqualification as well.

FINANCIAL PRICE BID FORMAT

Price bid format for all the two phases of the project is given in this section. The bidder shall quote as per the provided price bid format only.

- All the prices quoted shall be in Indian currency.
- In the technical bid, the bidder shall mention "Quoted" in the respective columns of the price bid for all the items. Any blank column shall be considered as not quoted and shall be treated as incomplete bid.
- In the commercial bid, the bidder shall not leave any column blank. Any blank column, except derived columns, shall be treated as zero cost.
- Any additional item/equipment/systems/software/hardware/license required for successful completion of the project, which are not specifically indicated in the Price bid, shall be included in the bid and no additional cost shall be paid by MDU ROHTAK for such items during implementation.
- All the quantities mentioned in the price bid are estimated for evaluation purpose; however, payment shall be made on actual quantity consumed during execution.
- All the systems/equipment offered shall be quoted with 3 years' comprehensive onsite warranty.

S.No.	Item Description	Unit	Min Qty	Make and Model	Supply Unit Rate	Supply Amount	GST%	Total	Installation Unit Rate	Installation Total Rate (Unit Rate x Qty)	GST%	Total	Grand Total
1	Rodent Repellent System	Set	1										
2	Water Leak Detection System	Set	1										
3	**Access Control System**	Nos.	2										
4	NOVEC Gas System	Set	1										
5	Fire Alarm System	Set	1										
6	VESDA System	Set	1										
7	Fire Rated Door	Nos.	1										
8	Fire Retardant Paint	Sqft	2500										
9	LED Light fixture for Server room with wiring	Nos.	10										
10	Electrical Main input panel for PAC, UPS and Raw power	Nos.	1										
11	Distribution system for DC including point wiring, Inter rack electrical cabling, DB, Industrial Sockets, Switch Sockets for point	Set	1										

	wiring for IBMS electrical distribution.												
12	Electrical Switchgear for Output DBs	Lot	2										
13	PVC Conduit	Lot	1										
14	FR and LSZH cabling for UPS, panel, racks	Lot	1										
15	Air/Dust Purifier DEC	Nos.	1										
16	UPS System	Nos.	2										
17	DCIM System for IBMS equipment/ DG set/PDU/UPS/PAC	Set	1										
18	Cisco GLC-LH-SMD= Transceivers	Nos	75										
19	IT Racks with containment With complete accessories	Nos.	11										
20	IP PDUs	Nos.	28										
21	Structured Cabling System (LSZH) Rack to rack with Fiber connectivity for 14 racks	Lot	1										
22	125 KVA Generator Set (With IP Remote Monitoring)	Nos.	1										
23	Rack Foldable Monitoring System with trolley	Nos.	1										
24	Mobile Work stations	Nos.	2										
25	Manpower support in General Shift or emergency availability.	Job											

NOTE:

Line items quantified as ‘LOT’ ‘Set’ has been included as per budgetary estimate.

All the Financial Documents should be uploaded on the e-tender portal. The non-submission/poor management of documents may lead to disqualification as well.