Tender Reference No.: NUSRL/RNC/2023/111992 Date: 10-11-2023



Strengthening of Network and IT Infrastructure

at

National University of Study and Research in Law, Ranchi

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SECTION-I

NOTICE INVITING TENDER (NIT)

To,

Sub: Invitation of sealed bids for "Strengthening of Network and IT Infrastructure" at NUSRL, Ranchi.

- 1. National University of Study and Research in Law (NUSRL) is a University established by Act No. 4 of Jharkhand State Assembly in 2010.
- 2. The main objective of this project is to develop future ready Network Infrastructure (to cope up the future requirement of about 10 years) with the help of trending technologies, cost effective measures and less human intervention systems.
- 3. NUSRL invites sealed bids, from eligible and qualified bidders for develop future ready Network Infrastructure (to cope up the future requirement of about 10 years) at NUSRL, At Nagri, P.O. Bukru, Ranchi Pithoria Road, Kanke, Ranchi. The Limited Tender Document has been uploaded on NUSRL website www.nusrlranchi.ac.in and can be downloaded by the interested bidder.

KEY DETAILS

Tender reference number	NUSRL/RNC/2023/
Name of work	Strengthening of Network and IT Infrastructure at NUSRL, Ranchi
Place of availability of Tender	Website of NUSRL: www.nusrlranchi.ac.in
Document.	Any further amendment to Tender will placed on website only
Last date, time & place for submission of tender	22 nd November, 2023 at 15:00hrs
Tender Opening details	Bids shall be opened on 23 rd November, 2023 at 15:30hrs at the above address
Contact Details	E-Mail ID: purchase@nusrlranchi.ac.in
Tender Fee	Tender Fee: Rs.1,000/-
	(Rupees One Thousand only)

Earnest Money Deposit (EMD)	Earnest Money Deposit (EMD): Rs.1,00,000/- (Rupees One Lac only) The EMDs shall be in the form of demand draft issued by a nationalized bank or a Scheduled Bank in favour of 'NUSRL, Ranchi' payable at Ranchi. NUSRL shall not be liable to pay any interest on the EMD.
Envelope & Dispatch	 The bidders must submit the bids under 2 packets system i.e. i. Technical bids containing all technical details along with EMD Demand Draft in one envelope. iii. Financial Bid as per Annexure-II in second envelope. iii. Both Technical and Financial Bid envelopes should be sealed and placed in a separate third envelope marked as 'Strengthening of Network and IT Infrastructure'. The Bid should be addressed to: The Registrar, National University of Study and Research in Law, At Nagri, PO – Bukru, Ranchi Pithoria Road, Kanke, Ranchi - 834006 The envelope should clearly indicate the Name of the Bidder and his address. The Bidder may send the bid by Speed/Registered Post or in person. NUSRL will take no responsibility for delay, loss or non-receipt of bids if not received within the stipulated
	date & time. Bids submitted by any other mode will not be accepted.
Address for communication	The Registrar, National University of Study and Research in Law, At Nagri, PO – Bukru, Ranchi Pithoria Road, Kanke, Ranchi - 834006 E-Mail: registrar@nusrlranchi.ac.in

- 4. Tenderer may download the tender documents from the web site www.nusrlranchi.ac.in and submit its bid by utilizing the downloaded document.
- 5. The agency may visit the location and check the feasibility.
- 6. Tenders shall ensure that their bids complete in all respects, are submitted on or before the closing date and time of submission indicated in the key details, failing which the tenders will be treated as late and rejected.
- 7. In the event of any of above mentioned dates being declared as a holiday / closed day for the purchase organization, the tenders will be received/opened on the next working day at the appointed time.
- 8. NUSRL takes no responsibility for delay, loss or non-receipt of tender documents sent by post.
- 9. NUSRL reserves the right to accept or reject any or all of the tenders in full or in part including the lowest bid without assigning any reasons or incurring any liability thereof.

SECTION-II

SCOPE OF WORK

a) The following upgrades/changes are proposed to upscale the Server Room capacity for productivity enhancement and efficient operation of servers and also as an initiative of Digital India. This project include configuring of the existing Switches, Access Points and installation of new Firewall/UTM (HA) device, Access Points, L-2, L-3 switches including safety, security monitoring, Also required power backup of one hour in both the hostels.

This document provides the technical and functional requirement for establishing IT/ non-IT infrastructure at NUSRL, Ranchi. Bidders are required to carry out due diligence while proposing a suitable, best of class, scalable & cost effective solution for establishing a stable structured Network in the campus.

IT Infrastructure should be designed & installed to provide highest level of physical security and also cover risks. The infrastructure once implemented should offer comprehensive protection and multi-functional security coverage for backup systems, server systems, network and communication systems. The Successful Bidder should also ensure that all the equipment in the Server rooms is appropriately maintained and managed.

The IT infrastructure should be implemented by the Vendor as per the specification given in the document. The Blue print of the proposed area will be prepared by the successful bidder after the contract has been awarded. Vendor will undertake all the necessary activities for successful implementation of the LAN and Wi-Fi network.

- b) Any change that is needed to be carried out in the existing setup shall be carried out after approval by the competent authority of NUSRL. The same shall be informed in advance so as to plan the downtime/impact to the end users. The work shall be carried out as per NUSRL compliance and requirements communicated to the vendors from time to time.
- c) Vendors shall ensure that the proposed solutions/components/services are as per applicable regulations in India. The vendor shall be responsible for implementing and maintaining the implemented solutions/services as per applicable regulations in India.
- d) Vendors shall submit architectural design of proposed Network Infrastructure.

SECTION-II:

INSTRUCTIONS TO BIDDERS

1. Bid Security (EMD-Earnest Money Deposit):

Bidders shall submit, along with their Bids, a demand draft for EMD (amount specified in the tender notification table), drawn on any Scheduled bank in favour of 'NUSRL, Ranchi' payable at Ranchi. EMD in any other form will not be accepted.

- a) The EMD is interest free.
- b) The EMD, for the amount mentioned above, of remaining unsuccessful bidders will be refunded after signing of agreement and submission by the successful bidder.
- c) The bid submitted without EMD, mentioned above, will be rejected without providing any further opportunity to the bidder concerned.
- d) The bidder shall extend the validity of the offer and EMD, if required.
- e) The EMD may be forfeited, if a bidder withdraws its bid during the period of bid validity.

2. <u>Venue & Deadline for submission of proposals</u>

- a) Bids duly completed in all respects as specified in the Tender document, must be submitted to NUSRL as specified in the Key details Table.
- b) Last Date & Time of submission: As given in the Key details Table
- c) NUSRL may, in exceptional circumstances and at its discretion, extend the deadline for submission of proposals by issuing an addendum, in which case all rights and obligations of NUSRL and the bidders previously subject to the original deadline will thereafter be subject to the deadline as extended.

3. **Late Bids**

Bids received after the due date and time as specified in the Tender Notification Table (including the extended period if any) for any reason what so ever, shall not be entertained by NUSRL.

4. (a) Validity of Bid:

Bids shall remain valid for a period of 60 days from the date of bid opening.

(b) Bid Evaluation:

The Technical Bids shall be evaluated by Tender Committee. The Financial Bids shall be opened only for those bidders who shall be declared technically eligible after evaluation of technical bids by tender committee.

5. Eligibility Criteria

- a) The Bidder should have experience in India for supply & commissioning of at least two similar products (Wi-Fi/LAN/ UTM) in last 5 years as on Bid Submission date. Following supporting documents to be enclosed: Copy of Work Order & Completion Report.
- b) The bidder must submit the declaration from the OEM stating that the OEM has supplied their Wi-Fi/LAN/ UTM in the Govt. / PSU Data Centre/ Institute.
- c) The Bidder should compulsorily possess following certifications:
 - ISO 9001:2015 Quality Management System
 - ISO 27001:2013 Information Security Management System
- d) Profit & Loss Statement, Balance sheet for last 3 financial years including audit report.
- e) Copy of the Income Tax Returns for three previous years for income tax purpose.
- f) Copy of TDS certificate issued by the client to substantiate the claim for the value of works executed in the private sector.
- g) Tender Specific Authorizations are required for every Product in Name of 'The Registrar, NUSRL, Ranchi with Tender Number & Date.
- h) Deceleration for 95% uptime with Explanation of Network infrastructure (LAN, Wi-Fi & UTM) along with technical bid must submit by Bidder.
- i) Bidder Financial Standing
- j) Local office in the state
- k) Dedicated toll Free Telephone No. for Service Support: OEM; Bidder
- 1) Acceptance of All Terms & Condition of tender
- m) Declaration for all submitted documents are true.
- n) List of Certified Engineer with their certification of LAN, Wi-Fi, UTM, Server. must be done by on roll employee, submit by bidder.

6. Present Network status

a. Network Manageable Switch
b. Wireless Network Access Point
c. UPS Power Supply (10KVA)
d. Number of network users in NUSRL
47 Nos.
22 Nos.
04 Nos.
750 (approx.)

7. Summary of Scope of work:

This RFP is based on the requirement of NUSRL to meet the high availability and maintain uptime of 99.5% on an annual basis, for the IT services to keep its operations safe, secure and operational.

The bidder has to make necessary arrangement so that the existing network does not go down, if go down then down time should not be more than 2hrs continuously. It is also required to make necessary arrangement for the repairing of existing structure, wherever damaged with matching aesthetic in the entire project duration.

NUSRL invites Request for Proposal (RFP) for strengthening of its Network and IT Infrastructure.

The interested bidding Organizations may go through this RFP Document and submit their proposal along with required supporting documents for the proposed system.

8. Acceptance Certificate

On successful completion of acceptability test for 15 days and after NUSRL is

satisfied with the accuracy and completeness of the performance of the LAN/Wi-Fi services with internet, the acceptance certificate signed by the representative of NUSRL and representative of the Vendor will be issued. The date on which such certificate is signed shall be deemed to be the completion date.

9. **Language:**

The bid and all related correspondence and documents in relation to the bidding process shall be in English language.

Supporting documents and printed literature furnished by the bidder with the bid may be in any other language provided that they are accompanied by translations of all the pertinent passages in the English language, duly authenticated and certified by the bidder.

Supporting materials, which are not translated into English, may not be considered. For the purpose of interpretation and evaluation of the bid, the English language translation shall prevail.

10. Agency details:

The Agency to fill in the vendor detail form enclosed with this Tender Document as **Annexure–IV** and same may be forwarded along with Bid.

11. Acceptance of terms & conditions:

Bidders are requested to submit the sealed and signed copy of this tender document along with Bid as acceptance of all terms & conditions. No deviation from the tender clauses shall be acceptable.

12. NUSRL's Right to terminate the Process

- a) NUSRL reserves the right to accept or reject any bid, and reject all proposals at any time prior to award of agreement, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for actions taken by NUSRL.
- b) NUSRL is accepting the bids on a no cost no commitment basis.
- c) NUSRL makes no commitments, express or implied, that this process will result in a business transaction with anyone.

13. Acceptance of part/whole bid/ modification–Rights there of

NUSRL reserves the right to accept or reject wholly or partly bid offer, or modify the specifications / quantities / requirements mentioned in this 'Tender' including addition / deletion/alternation of any of the item or part thereof, without assigning any reason whatsoever. No correspondence in this regard shall been entertained. NUSRL also reserves the unconditional right to place order on wholly or partly bid quantity to successful bidder.

14. All the rates quoted by the bidder shall remain unchanged during the period of contract.

GENERAL INSTRUCTIONS TO BIDDERS

- 1. All entries in the Bid form should be legible and filled clearly. Any overwriting or correction which is unavoidable has to be signed by the authorized signatory.
- 2. The bidder shall quote for all the items of Financial Bid (*Annexure-II*) failing which the bid shall be considered nonresponsive, incomplete and bid will be summarily rejected.
- 3. Bid incomplete in any way will be rejected out rightly. Similarly conditional Bids will also be rejected out rightly.
- 4. Pre-Qualification and Bid documents will be scrutinized, by the evaluation committee as constituted by NUSRL to check all requisite and relevant documents and their authenticity.
- 5. In case the successful Bidder declines the offer of Contract, for whatsoever reason(s), his EMD will be forfeited.

6. Confidentiality:

All the information supplied by NUSRL to the Agency is to be kept confidentially and no part of it should be shared with anyone other than the authorized persons, without express written permission from NUSRL.

7. Arbitration:

The parties agree that any decision for Award of any Arbitral Tribunal pursuant to this clause shall be a domestic award and final, conclusive and binding upon the parties and any person affected by it. The parties also agree that any arbitration award rendered pursuant to this clause may be enforced by any court of competent jurisdiction.

8. **Tendering Expense**

The tenders shall bear all costs and expenditure incurred and/or to be incurred by it in connection with its tender including preparation, mailing and submission of its tender and for subsequent processing the same. NUSRL will, in no case be responsible or liable for any such cost, expenditure etc. regardless of the conduct or outcome of the tendering process.

9. **Alteration and Withdrawal of Tender**

The tenders, after submitting its tender, is permitted to alter/modify its tender so long as such alterations / modifications are received duly signed, sealed and marked like the original tender, within the deadline for submission of tenders. Alterations / modifications to tenders received after the prescribed deadline will not be considered.

No tender should be withdrawn after the deadline for submission of tender and before expiry of the tender validity period. If a tenderer withdraws the tender during this period, it will result in forfeiture of the earnest money furnished by the tenderer with its tender.

10. **Bids Clarifications**

If a tenderer needs some clarifications relating to this tender enquiry, he may ask the required information from the contact person within 7 days.

11. **Disqualification**

The proposal is liable to be disqualified in the following cases or in case bidder fails to meet the bidding requirements as indicated in this tender:

- a) Proposal not submitted in accordance with the procedure and formats prescribed in this document or treated as non-conforming proposal.
- b) During validity of the proposal, or its extended period, if any, the bidder increases its quoted prices.
- c) The bidder's proposal is conditional and has deviations from the terms and conditions of tender.
- d) Proposal is received in incomplete form.
- e) Proposal is received after due date and time.
- f) Proposal is not accompanied by all the requisite documents.
- g) Information submitted in bid is found to be misrepresented, incorrect or false, accidentally, unwittingly or otherwise, at any time during the processing of the contract (no matter at what stage) or during the tenure of the contract including the extension period if any.
- h) Bidder tries to influence the proposal evaluation process by unlawful/corrupt/fraudulent means at any point of time during the bid process.
- i) In case any one party submits multiple proposals or if common interests are found in two or more bidders, the bidders are likely to be disqualified, unless additional proposals/ bidders are withdrawn upon notice immediately.

PRE CONTRACT INTEGRITY PACT

GENERAL

This pre-bid pre-c	ontract Agreement (hereinafter	called the Integrity Pact) is made on
day of the month of	2023, between, on one hand	d, acting through Shri/Smt,
Registrar, NUSRL, Ranch	ni (hereinafter called the "Buyer	r", which expression shall mean and
include, unless the contex	t otherwise requires, his success	or sin office and assigns) of the First
Part and M/s	Represented by Shri	, Chief Executive
Officer (here in after call	led the "BIDDER/Seller" which	n expression shall mean and include,
unless the context otherwis	se requires, his successors and pe	ermitted assigns) of the Second Part.

WHEREAS the Buyer proposes to procure (Internet Leased Line) and BIDDER/Seller is willing to offer / has offered the ILL Services and WHEREAS the BIDDER is a private company/public company/ Government undertaking/ partnership / registered expert agency, constituted in accordance with the relevant law in the matter and the Buyer is a PSU performing its functions on behalf of the NUSRL. NOW, THEREFORE, To avoid all forms of corruption by following a system that is fair, transparent and free from any influence / prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to: Enabling the Buyer to obtain the desired said ILL Services/equipment / item at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and Enabling BIDDERs to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the Buyer will commit to prevent corruption, in any form, by its officials by following transparent procedures.

The parties here to here by agree to enter in to this Integrity Pact and agree as follows:

1. Commitments of the Buyer

1.1 The Buyer undertakes that no official of the Buyer, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the BIDDER, either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the contract.

NUSRL, At Nagri, PO-Bukru, Kanke, Ranchi - 834006

1.2 The BUYER will, during the pre-contract stage, treat all BIDDERs alike, and will provide to all BIDDERs the same information and will not provide any such information to any particular BIDDER which could afford an advantage to that particular BIDDER in comparison to other BIDDERs.

- 1.3 All the officials of the Buyer will report to the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.
- 2. In case any such preceding misconduct on the part of such official (s) is reported by the BIDDER to the Buyer with full and verifiable facts and the same is prima facie found to be correct by the Buyer, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the Buyer and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the Buyer the proceedings under the contract would not be stalled.

3. Commitments of BIDDERs

The BIDDER commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any pre-contract or post-contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following:

- 3.1 The BIDDER will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Buyer, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.
- 3.2 The BIDDER further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Buyer or otherwise in procuring the Contract or forbearingtodoorhavingdoneanyactinrelationtotheobtainingorexecution of the contract or any other contract with the Government for showing or forbearing to show favour or disfavor to any person in relation to the contract or any other contract with the Government.
- 3.3 Bidders shall disclose the name and address of agents and representatives and Indian BIDDERs shall disclose their foreign principals or associates.
- 3.4 BIDDERS shall disclose the payments to be made by them to agents/ brokers or any other intermediary, in connection with this bid/contract.
- 3.5 The BIDDER further confirms and declares to the Buyer that the BIDDER is the original manufacturer/integrator/authorized government sponsored export entity and has not engaged any individual or firm or company whether Indian or foreign NUSRL, Ranchi to intercede, facilitate or in any way to recommend to the Buyer or any of its functionaries, whether officially or unofficially to the award to the contract to the BIDDER, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.

- 3.6 The BIDDER, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of the Buyer or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.
- 3.7 The BIDDER will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.
- 3.8 The BIDDER will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.
- 3.9 The BIDDER shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the Buyer as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The BIDDER also undertakes to exercise due and adequate care lest any such information is divulged.
- 3.10 The BIDDER commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.
- 3.11 The BIDDER shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.
- 3.12 If the BIDDER or any employee of the BIDDER or any person acting on behalf of the BIDDER, either directly or indirectly, is a relative of any of the officers of the Buyer, or alternatively, if any relative of an officer of the Buyer has financial interest / stake in the BIDDER's firm, the same shall be disclosed by the BIDDER at the time of filing of tender.
- 3.13 The BIDDER shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the IS Unit.

4. EARNEST MONEY (SECURITY MONEY)

- 4.1 While submitting commercial bid, the BIDDER shall deposit an amount of Rs. 1,00,000/(Rupees One Lac Only) as Earnest Money / Security Deposit, with the Buyer through Demand Draft in favour of NUSRL, Ranchi.
- 4.2 The Earnest Money / Security Deposit shall be valid up to a period of five years or the complete conclusion of the contractual obligations to the complete satisfaction of both the BIDDER and the Buyer, including warranty period, whichever is later.
- 4.3 In case of the successful BIDDER a clause would also be incorporated in the Article pertaining of Performance Bond in the Purchase Contract that the provisions of Sanctions for Violation shall be applicable for forfeiture of Performance Bond in case of a decision by the Buyer to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.
- 4.4 No interest shall be payable by the Buyer to the BIDDER on Earnest Money / Security Deposit for the period of its currency.

5. FALL CLAUSE

The BIDDER undertakes that it has not supplied / is not supplying similar product/systems or subsystems at a price lower than that offered in the present bid in NUSRL, Ranchi respect of any other Ministry/Department of the Government of India or PSU and if it is found at any stage that similar product/systems or sub systems was supplied by the BIDDER to any other Ministry/Department of the Government of India or a PSU at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in the cost would be refunded by the BIDDER to the Buyer, if the contract has already concluded.

6. LAW AND PLACE OF JURISDICTION

This Pact is subject to Indian Law. The place of performance and jurisdiction is the seat of the Buyer.

7. OTHER LEGAL ACTIONS

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

8. VALIDITY

- 8.1 The validity of this Integrity Pact shall be from date of its signing and extend up to 5 years or the complete execution of the contract to the satisfaction of both the BUYER and the BIDDER/Seller, including warranty period, whichever is later. In case BIDDER is unsuccessful, this Integrity Pact shall expire after six months from the date of the signing of the contract.
- 8.2 Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions.

9. The parties here by sign this Integrity Pact at _	on
BUYER	BIDDER
Name of the Officer:	Name of the Officer:
Designation:	Designation:
Witness	Witness
1	1

Details of Requirement:

NUSRL needs following link at its campus:

NUSRL needs following link at its campus: Materials Part				
SI. No.	Materials Description	Make	UOM	Qnty
1	12 Core SM FO Cable		Meters	2500
2	40/30 mm HDPE Conduits		Meters	2500
3	40/30 mm HDPE Couplor		Nos	5
4	24 Ports Fully Loaded Pigtail ,adaptor LIU		Nos	4
5	SC-LC Duplex SM FO Patchcord		Nos	8
6	Cat-6 UTP Patchcable		Nos	10
7	Cat-6 Cable (305M)		Nos	16
8	Rj-45 Jack Male		Nos.	200
9	12 U Network Rack With Fan, Self, PDU and Hardware		Nos.	1
10	L3 24 Ports Ethernet POE ,4 Ports 10G SFP+		Nos.	1
11	10G SFP+ Tranreciver		Nos.	8
12	L2 24 Ports Ethernet POE ,4 Ports 10G SFP+		Nos.	3
13	Outdoor Acces Point		Nos.	70
14	Wireless Controller with HA		Nos.	2
15	Firewall UTM device with HA		Nos.	2
16	Intel® Xeon® E3-1220 v5 (3.0GHz, / 4 Core /8MB/ 80W) /4 DIMMS /2X8GB / upto 4 drives (3.5 inch) SATA / 2X1TB SATA (3.5 inch) 7.2k RPM / Onboard / DVD Writer / 1X inbuilt (250W) /Os Windows Server 2019 x64 Standard		Nos.	1
	Services Part:			
Sl.No.	Service Description		UOM	Qnty
1	HDPE Pipe Laying underground		Meters	2500
2	FO Cable laying		Meters	2500
3	FO Pigtail Splicing and LIU dressing /Mounting		nos	4
4	UTP cable laying in PVC Conduits		Meters	4880
5	Rj-45 Jack Crimping		nos	200
6	Wall Mount Network Mounting		nos	1
7	Wirless AP Celling /Wall Mounting		nos	70
8	New Network Switch instllation & Configuration		nos	3
9	Firwal device Installation& Configuration		Nos	2
10	Wireless Controller Installation & Configuration		nos	2
11	Existing Switch Configuration		nos	47
12	Radius Server Installation and Configuration		nos	1
13	Project Manegment, Configuration and Documnetation		Lot	1

Location address: NUSRL, At Nagri, PO Bukru, Kanke, Ranchi - 834006

SECTION-III

1. Detailed Technical Specifications:

This section will provide the minimum requirement/ technical specification of the item that is desired under the proposal. While it is mandatory for the bidder to meet these minimum requirements, if the bidder feels that a particular requirement would need a higher category of equipment, the same should be provisioned in his/ her bid. The bidder should however provide basis for arriving at the solution being proposed as part of the bid. Such estimations or technical specifications should be stated as part of the Compliance Matrix with Statement of Deviations. The bidder should design the solution to provide scalability to CPCB. All items should be of standard and reputed brands. All IT equipment should be IPv6compliant.

TENDER SPECIFICATION FOR SINGLE MODE UNITUBE ARMOURED FIBER CABLE

SR. NO.	SPECIFICATION/QUALITATIVE REQUIREMENT	COMPLIANCE (YES/NO)
1	06/08/12/24-Core, Singlemode 9/125 micron primary coated buffers, 10G Ethernet OS2, Armoured Loose Tube, ECCS (Electrolytic Chrome Coated Steel) Tape, Jelly Filled Loose Tube.	
2	Two Steel Wires/Rods embedded in outer periphery of the jacket as strength members. UV Stabilised jacket and protected from Rodent attacks	
3	Complying to ANSI/TIA-568-C.3, ISO/IEC 11801, Telecordia GR-20 Core, ITU-T REC G.652D, IEC 60793-1/60794-1, EN 50173, RoHS Compliant	
4	Suitable for use in indoor/outdoor ducts, direct burial and backbone cabling	
5	Loose tube material : Polybutylene Terephthalate (PBT) with Natural/White Colour having Inner Diameter/Outer Diameter $1.7/2.5 \pm 0.1$ mm	
6	Peripheral strength member as two steel wires/rods having dimensions as 0.6 ± 0.05 mm	
7	Moisture Barrier as Water Swellable Tape, Armouring ≥ 0.150 mm (ECCS Tape), Number of Ripcords as 01 no polyester based yarns.	
8	Outer sheath material as HDPE/LSZH with diameter as $7.5/8.5 \pm 0.5$ mm having thickness of 1.5mm nominal	
9	Weight of the cable for $04/06/08/12$ core (HDPE/LSZH): $65.0/75.0 \pm 10$ kg/km, for 24 core (HDPE/LSZH): $75.0/95.0 \pm 5$ kg/km	
10	Fiber colour and Loose tube colour as per ANSI/TIA standards.	
11	Tensile Strength: 1000 N, Crush Resistance: 4000 N/100mm	
12	Minimum bend radius : 20 x Diameter (during installation), Minimum bend radius : 10 x Diameter (during full load)	
13	Fiber Type: G. 652D (OS2)	
14	Attenuation : ≤ 0.38 dB/km (@1310 nm), ≤ 0.25 dB/km (@1550 nm)	
15	Chromatic Dispersion : ≤ 3.5 ps/nm.km (@1285 - 1330 nm), ≤ 18 ps/nm.km (@1550 nm)	
16	Zero Dispersion Wavelength: 1300 - 1324 nm	
17	Zero Dispersion Slope : ≤ 0.092 ps/nm².km	
18	Polarisation Mode Dispersion : $\leq 0.2 \text{ ps/}\sqrt{\text{km}}$	

SR. NO.	SPECIFICATION/QUALITATIVE REQUIREMENT	COMPLIANCE (YES/NO)
19	Cut-off Wavelength : ≤ 1260 nm	
20	Mode Field Diameter : $9.2 \pm 0.4 \ \mu m \ (@1310 \ nm)$, $10.4 \pm 0.4 \ \mu m \ (@1550 \ nm)$	
21	Core Cladding Concentricity Error : ≤ 0.8 μm	
22	Cladding Diameter : $125 \pm 1~\mu m$, Coating Diameter : $245 \pm 10~\mu m$	
23	Cladding Non-circularity : ≤ 1 %	
24	Installation Temperature: -20 °C to +70° C, Operating Temp: -20 °C to +60° C	
25	Cable Size and Standard Length: 4F to 12F : 4.0 kms \pm 10% 24F : 2.0 kms \pm 10%	

TENDER SPECIFICATION FOR FIBER RACKMOUNT LIU LOADED DRAWER TYPE 06/12/24 PORT

SR. NO.	SPECIFICATION/QUALITATIVE REQUIREMENT	COMPLIANCE (YES/NO)
1	The Fiber Rackmount LIU loaded having Adapter panel fixed on drawer base frame, with Adapters and with Pigtails and assembled with splice tray as per the Loaded fiber port requirement and their applicable accessories.	
2	Suitable to mount at different positions (depth wise) on standard 1U 19 inch racks. Drawer type to pull out for easy maintenance when assembled in racks.	
3	Cold Rolled Steel material with black powder coating	
4	Three types of cable entry holes for different size cables through cable glands, covered with rubber cable grommets/covers.	
5	Splicing of 24 fibers in each plastic fiber splicing trays with integrated cable spool design.	
6	Non removable top cover and no rear cover. Drawer type to pull out for better access of interior.	
7	As per the Loaded fiber port requirement, Loaded 6/12/24 (SCSimplex) adapters with SC SIMPLEX Pigtails on rackmount ports.	
8	As per the Loaded fiber port requirement Accessories kit consists of Cable management rings/Cable saddles, Cable glands (PG13.5, 2 nos), Splice rods, Blanking clips, Velcro ties, Cable ties, Cable inlet/outlet hole covers(2 types, 2 nos each)	
9	Cable management rings/Cable saddles can be mounted inside the rackmount, no provision to mount outside in front of the adapter panel.	
10	Suitable for storing up to 3 meter of 900 µm tight buffered fiber pigtail per adapter.	
11	Panel Dimensions: 482 x 220 x 44.3 mm (Length x Width x Height)	
12	Splice Tray Dimensions: 220 x 90 x 15 mm (Length x Width x Height)	
13	Port identification numbers printed on the Adapter panel	
14	Standards: Comply as per ANSI/TIA-568-C.3, ISO/IEC 11801, RoHS Compliant.	
1.5	Operating Temperature : -20 °C to +70° C	
15	Installation Temperature : -20 °C to +70° C	
16	Product should be Make in India and OEM should have own manufacturing facility in India since 5 Years. The OEM brand should be Indian origin only.	

SR. NO.	SPECIFICATION/QUALITATIVE REQUIREMENT	COMPLIANCE (YES/NO)
17	All OFC, Cat6 Cable and accessories should be from same make for better compatibility and management.	

TENDER SPECIFICATION FOR FIBER PATCHCORD SINGLEMODE

SR. NO.	SPECIFICATION/QUALITATIVE REQUIREMENT	COMPLIANCE (YES/NO)	REMARK
1	Fiber optic patch cord with two core (Duplex) fiber cable terminated with LC connector at one end and SC connector at other end		
2	The terminated connectors in assemblies are designed and are compatible with industry standards (ANSI/TIA-568-C.3, ISO/IEC 11801).		
3	Have good geometrical characteristics of apex offset & radius of curvature & fiber height		
4	100% factory terminated and tested for optical characteristics & fiber end face finish.		
5	Fiber type G. 652D standard. OS2 (9/125 μm),		
6	Buffer Diameter : 0.9 ± 0.05 mm, Jacket Thickness : 0.35 ± 0.05 mm, Strength Member as Aramid yarn		
7	Cable Diameter: $2.0 \times 3.8 \pm 0.2$ (Duplex)		
8	Jacket color : Yellow, Jacket Material : LSZH, Length : 3 Mtr		
9	Connector Ferrule : Ceramic, Apex Offset should be <50um, Fiber height should be ±100nm		
10	Connector Repeatability ≤ 0.2dB with 1,000 times mating cycles.		
11	Connector cable retention : 50 N (11.24 lbs), Crush resistance : 100N/100mm, Bend Radius: 20xDiameter of cable		
12	Attenuation : ≤ 0.36 dB/km (@1310 nm), ≤ 0.25 dB/km (@1550 nm)		
13	Chromatic Dispersion : ≤ 3.5 ps/nm.km (@1285 - 1330 nm), ≤ 18 ps/nm.km (@1550 nm)		
14	Zero Dispersion Wavelength: 1300 - 1324 nm		
15	Cut-off Wavelength : ≤ 1260 nm		
16	Mode Field Diameter : $9.2 \pm 0.4~\mu m$ (@1310 nm) , $10.4 \pm 0.5 \mu m$ (@1550 nm)		
17	Insertion Loss (@1310 &1550nm) : SM (UPC/PC) Type : SC/LC/ST/FC : ≤ 0.3 dB Return Loss (@1310 &1550nm) : SM (UPC/PC) Type : SC/LC/ST/FC : ≥50 dB		
18	Insertion Loss (@1310 &1550nm) : SM (APC) Type : SC/LC/ST/FC : ≤ 0.3 dB Return Loss (@1310 &1550nm) : SM (APC) Type : SC/LC/ST/FC : ≥60 dB		

SR. NO.	SPECIFICATION/QUALITATIVE REQUIREMENT	COMPLIANCE (YES/NO)	REMARK
19	Traceability sticker available for product tracking and Interferometry report need to submit		
20	Standards: IEC 60332-1, ANSI/TIA-568-C.3, ISO/IEC 11801 RoHS Compliant		
21	Installation Temperature : -20 °C to +70° C, Operating Temperature : -20 °C to +70° C		
22	Product should be Make in India and OEM should have own manufacturing facility in India since 5 Years. The OEM brand should be Indian origin only.		
23	All OFC, Cat6 Cable and accessories should be from same make for better compatibility and management.		

TENDER SPECIFICATION FOR CAT6 UTP PATCHCORD

SR. NO.	SPECIFICATION/QUALITATIVE REQUIREMENT	COMPLIANCE (YES/NO)	REMARK
1	Category 6 patch cords with four pair twisted stranded copper wire cable terminated with RJ45 modular plugs at both the ends.		
2	Patch Cords 100% factory tested for better quality and suitable for the high speed data transmission.		
3	Complies with the ANSI/TIA/EIA-568-C.2, ISO/IEC 11801, RoHS compliant Standard. Supports Data Networks Speeds Up to 10/100-Base-T and 1000-Base-T.		
4	Patch cord with LSZH jacket toreduced toxic/corrosivegasses emitted during combustion		
5	Transparent modular plugs with transparent slip on boot and cable assemblies		
6	T568B wiring scheme crimped at both connector ends.		
7	Available in different colors and different length on request		
8	Patch cord conductor: 24 AWG, Stranded copper wires, Insulation: HDPE		
9	Connector Plug: 30µ'' Gold plated contact, Phosphor Bronze base material		
10	Jacket Diameter : 5.8 ± 0.1 mm		
11	Plug Insertion/Extraction Life: 750 Cycles min. using FCC approved plug		
12	Plug & Jack Contact Force: 100 Grams min. using FCC approved plug		
13	Plug Retention Force : 11 lbf min.		
14	Current Rating: 1.5 amps, Voltage Rating: 72 Vdc max.		
14	Insulation Resistance : $500M\Omega$ min, Contact Resistance : $20m\Omega$ max, DC Resistance: 0.1Ω max.		

SR. NO.	SPECIFICATION/QUALITATIVE REQUIREMENT	COMPLIANCE (YES/NO)	REMARK
1	Category 6 patch cords with four pair twisted stranded copper wire cable terminated with RJ45 modular plugs at both the ends.		
15	ETL Verified 4-Connector Channel performance certificate		
16	Operating Temperature: -20 °C to +70° C Installation Temperature : -20 °C to +70° C		
17	Product should be Make in India and OEM should have own manufacturing facility in India since 5 Years. The OEM brand should be Indian origin only.		
18	All OFC, Cat6 Cable and accessories should be from same make for better compatibility and management.		

TENDER SPECIFICATION FOR SOLID CABLE CATEGORY 6 UTP FR-PVC

SR. NO.	SPECIFICATION/QUALITATIVE REQUIREMENT	COMPLIANC E (YES/NO)	REMARK
1	The 4 pair Unshielded Twisted Pair cable shall be UL® Listed and ETL verified		
2	This cable well exceeds the requirements of ANSI/TIA-568-C.2 and ISO/IEC 11801 Class E		
3	Nominal Outer Diameter of Cable should be 5.8 ± 0.2 mm and Conductor Diameter 23 AWG		
4	Construction: 4 twisted pairs separated by internal PE Cross Separator. Full separator. Half shall not be accepted. Rip Cord is must.		
5	Conductor: Solid bare Copper, Outer jacket sheath: FRPVCwith UL approved CM/CMR rated cable. Jacket color: Grey		
6	Insulation Material: High Density Polyethylene (HDPE) with Insulation Diameter : 0.89 ± 0.01 mm		
7	Dielectric Strength of cable should be 2.5 KVDC for 2 seconds		
8	Bending Radius :< 4X Cable Diameter at -20°C ± 1°C Pulling Force: 25.35 lbs		
9	Electrical Parameters: Insertion loss (Attenuation), NEXT, PSNEXT, ELFEXT (ACRF), PSELFEXT (PSACRF), Return Loss, ACR and PS ACR.		
10	Insertion Loss of 32.8 db/100m at 250 MHz		
11	Cable should support operating temperature from -20° to +70°C		
12	Cable support Conductor Resistance $\leq 9.38 \Omega/100 m$ Max.		
13	Mutual Capacitance of cable should be < 5.6nF/100m Max.		
14	Resistance Unbalance of cable should be 5% Max.		
15	Capacitance Unbalance of cable should Max. 330pF/100m		
16	Cable support Delay Skew: < 45 ns/100m, Operating Voltage: 72V		

SR. NO.	SPECIFICATION/QUALITATIVE REQUIREMENT	COMPLIANC E (YES/NO)	REMARK
17	Nominal Voltage of Propagation (NVP): 69% and Current Rating: 1.5A Max.		
18	Impedance: $100 \pm 15~\Omega$ @100 MHz. and Propagation Delay @250 MHz : 536 ns/100m		
19	ETL Verified 4-Connector Channel performance certificate		
20	RoHS Compliant		
21	Printed sequential Length Counter of each meter on Outer Jacket		
22	Category 6 UTP cables shall Supports Gigabit Ethernet (1000 base-T) verified upto 600 Mhz		

RJ 45 CONNECTOR

Sl.No.	SPECIFICATION/QUALITATIVE REQUIREMENT	COMPLIANCE (YES/NO)	REMARK
1	RJ-45 modular plugs for Local Area Network (LAN) and computer Applications, Suitable for Cat 6 Solid or Strandedcable, 3-Prong Design for accurate termination		
2	Current Rating: 250V AC max, at 2A		
3	Dielectric withstanding: 1000V DC/min, <0.5A		
4	Insulation Resistance : >500MΩ, 1000V DC/min.		
5	Contact Resistance : <20 MΩ		
6	Cable to plug tensile strength: 20lbs(89N)min		
7	Durability: above 750 mating cycles		
8	Temperature for operation : -40°C to +125°C		
9	Housing material : Polycarbonate UL94V-0		
10	Gold plating thickness: Gold flash 3MU"		
11	RoHS compliant		

$Layer\ 2+or\ Lite\ L3\ PoE+\ Switch\ 24\ Port\ 10/100/1000Mbps\ with\ 4\ x\ 1G/10G\ SFP+\ ports$

Sl			Compliance	Remarks
No		Specification	(Yes/No)	(If any)
1	Physical Ports	24 x 10/100/1000 MbpsEthernet PoE+ ports with 4 x 1/10Gig SFP+ ports. All Switch, transceiver, AP and WLC should be from same make for better compatibility and management		
2	Management port	1 x RJ45 port console port		
3	Switching Capacity	128 Gbps		
4	Throughput	96 Mpps		

		Switch should support EAPS and ERPS	
		Switch should support ISSU Uninterrupted system	
		upgrade	
		Switch should support Upto 4 Units per stack, 40 Gbps	
		stacking bandwidth	
		Switch should support VRRP, UDLD	
		G ' 1 1 1	
19	DIICD	Switch should support DHCP server/relay/client,	
	DHCP	DHCP snooping/option82	
		Switch should support Console, Telnet, SSH v1/2,	
20	Network	HTTP, HTTPS, SNMP v1/v2/v3, RMON	
20	Management	Switch should support TFTP, FTP, SFTP	
		Switch should support NTP, ZTP, SPAN, RSPAN	
		Product should be Make in India and OEM should	
20		have own manufacturing facility in India since 5 Years.	
	Country of Origin	The OEM brand should be Indian origin only.	
21	Warranty	3 Years	

	Single mode 10GE	SFP+ LX Transceiver LC type		
Sl no	Specification		Compliance (Yes/No)	Remarks (If Any)
1	Architecture	10Gig LX SFP + LC TypeTransceiver		
2	Connector	It should have duplex LC Connector		
3	Flow control.	Support 802.3e		
4	Mode	9/125 um Single mode Fiber Type up to 10 KM.		
5	Support wave lenght	1310nm		
6	Case Operating Temperature:	support up to 0°~70°		
7	Storage Relative Humidity:	support upto 5% to 95%		
8	Country of Origin	Product should be Make in India and OEM should have own manufacturing facility in India since 5 Years. The OEM brand should be Indian origin only.		

Layer 2+ Switch 24 Port 10/100/1000Mbps with 4 x 1G/10G SFP+ ports

Sl				Remarks
No		Specification		(If any)
		24 x10/100/1000BaseT + 4 x 10GE (SFP+) port, All		
	Physical Ports	Switch, transceiver, AP and WLC should be from same		
1		make for better compatibility and management		
2	Management Port	1 x RJ45 Ethernet Management port		
	Wianagement 1 Of t	1 x RJ 45 Console port and 1 x USB2.0 interface		
	Switching			
3	Capacity	128Gbps		
4	Throughput	95Mpps		
5	Flash	32MB		
6	RAM	256MB		
7	MAC Address	16K		
8	CPU	800MHz		

	Packet Buffer		
9	Memory	12MBits	
10	Routing Table	Support Static routing 422 entries	
11	ACL Table	512	
12	Relative Humidity	10%~90% non-condensing	
13	Temperature	Working 0°C~50°C, storage -40°C~75°C	
14	Power Supply	AC: 100~240VAC	
15	L2 Features	Switch should support IEEE802.3(10Base-T), IEEE802.3u(100Base-TX), IEEE802.3u(100Base-TX), IEEE802.3a(1000Base-T), IEEE802.3ae(10GBase), IEEE802.3x, IEEE802.3ak(10GBASE-CX4) Switch should support Port loopback detection, N:1 Port Mirroring Switch should support LLDP, LLDP-MED and UDLD Switch should support 802.3ad LACP, max 128 group trunks with max 8 ports for each trunk and LACP load balancing Switch should support RSPAN and ERSPAN Switch should support IEEEE802.1d(STP), IEEEE802.1w(RSTP), IEEEE802.1s(MSTP) Switch should support Root Guard, BPDU Guard, BPDU Tunnel Switch should support MAC VLAN, Voice VLAN, PVLAN, Protocol VLAN, Multicast VLAN and N:1 VLAN Translation Switch should support QinQ, Selective QinQ, Flexible QinQ Switch should support Broadcast/Multicast/Unicast Storm Control Switch should support Upto 4 Units per stack, 40 Gbps stacking bandwidth Switch should support IGMP v1/v2/v3 Snooping and IGMP Proxy Switch should support ND Snooping and MLDv1/v2 Snooping	
16	L3 Features	Switch should support Static Routing Switch should support Static Routing, Policy based routing	
17	QoS	Switch should support Traffic Classification Based on 802.1p COS, ToS, DiffServ DSCP, ACL, Port number Switch should support SWRR, SP,DWRR, WRED, SDWRR	
18	ACL	Switch should support IP ACL, MAC ACL, IP-MAC ACL Switch should support Standard and Extended ACL Based on source/destination IP or MAC, IP Protocol, TCP/UDP port, DSCP, ToS, IP Precedence, VLAN, Tag/Untag, CoS Switch should support REDIRECT and Accounting based ACL Switch should support Rules can be configured to port, VLAN, VLAN routing interfaces	

		Switch should support Time Ranged ACL	
		Switch should support 802.1x AAA	
		Switch should support Port and MAC based	
		authentication	
19	Security	Switch should support Accounting based on time	
17	Security	length & traffic	
		Switch should support Guest VLAN and auto VLAN	
		Switch should support RADIUS for IPv4 and IPv6,	
		TACACS+ for IPv4 and IPv6 and MAB	
		Switch should support DHCP Server/Client for	
		IPv4/IPv6, DHCP Relay/Option 82, DHCP	
20	DHCP	Snooping/Option 82	
		Switch should support CLI, WEB, Telnet,	
		SNMPv1/v2c/v3 through IPv4 and IPv6	
	Network	Switch should support Syslog Server	
21	Management	Switch should support HTTP SSL, SNMP MIB, SNMP	
		TRAP, FTP/TFTP, SNTP/NTP, RMON 1,2,3,9 and	
		SSH v1/v2	
		Switch should support 802.3ah OAM, 802.1ag OAM	
		Product should be Make in India and OEM should	
		have own manufacturing facility in India since 5 Years.	
22	Country of Origin	The OEM brand should be Indian origin only.	
23	Warranty	5 Years	

$Wi-FI\ 6\ Ceiling\ mount\ Access\ Point\ cum\ router\ with\ 10/100/1000 Mbps\ PoE\ Port\ 1800\ Mbps$

SL No	Technical Specif	fication	Compliance (Yes/No)	Remarks (If Any)
1	Chipset	Qualcomm IPQ6000+QCA5052+QCN502 2+QCA8071		•
2	Mounting	Ceiling / Wall		
3	Antenna Type	Internal		
4	Number Of Radios	2		
5	Frequency Band	Dual band		
6	Supported Wi-fi Standards	802.11a/b/g/n/ac/ax		
7	Max Wireless Signal Range imMts	50		
8	Channel Width (MHz)	80 MHZ		
9	Maximum Data Rate MBps	1800		
10	Supported Encryption	WEP/WPA2/AES/WPA3		
11	Receiver Sensitivity in db	-94		
12	Transmit power (tx)(dBm)	20 dbm		
13	Radio Resource Management such for power channel, coverage hole detection and performance optimization	Available		
14	Support for Load Balancing between 2-4 Ghz and 5 Ghz (Via Controller)	Available		
15	Support for Configurable Carrier Threshold	Available		

16	Device Management	Available
17	Support for QoS for Voice over Wireless	Available
18	Support for MIMO	MIMO
19	Number of MIMO supported & Spatial Streams (Per band)	2X2:2
20	Number of WLAN (SSID) per AP	8
21	Maximum clients Nos	150
22	Support for Autonomous access- point option	Available
23	Number of 10/100/1000 port	2
24	Support for Beam forming	Available
25	Operate as a sensor for wireless IPS	Available
26	Support for QoS and Video Call Admission Control capabilities	Available
27	Support for Rogue access point detection	Available
28	Support for Wireless Intrusion Protection System	Available
29	WPC certified	Available
30	Support non-Wi-Fi detection for off- channel rogues and Containment for both radio while serving the client simultaniously	Available
31	Powering options (Such as AC/DC, 802/3af PoE, 802/3at PoE+), specify	DC + 802.3at PoE
32	Operating Temperature Range (Degree C)	0 ~ 40 DEG CEL
33	Operating Humidity (%RH)	0%~90%
34	Weight (grams)	<1000
35	Ingress Protection	IP31
36	FIT / FAT Mode'	Available
37	Supported on Hardware WLAN controller	YES
38	Modes Supported	AP + Repeater + Router
39	Support MU-MIMO, Wave2.0, OFDMA and Seamless Roaming.	Available
40	QAM Modulation	1024
41	Build in Smart Channel Analysis Tool,help to select the less Wi-Fi Interference channels, ensure the stability wireless signal.	Available
42	Support BSS color bit and dynamic CCA-SD (Clear Channel Assessment Signal Detection) threshold and power adjustment, effectively alleviates the channel interference in multi-users scenarios, improve the utilization of spectrum resources.	Available
43	TWT (Target Wake-up Time) allowing devices to negotiate when need to wake	Available

	up, send and receive data.		
44	Meet with demand of high-speed applications such as VR/ AR, 4K or 8K stream media.	Available	
45	Support seamless roaming, 802.11kvr standard	Available	
46	Product Warranty should be 3 Years.	Available	
47	Product should be Make in India and OEM should have own manufacturing facility in India since 5 Years. The OEM brand should be Indian origin only.	Available	

Firewall

Sl. No.	Features	Description	Compliance
1	Type	NGFW	
2	Form Factor (RU)	1	
3	Features	Layer 3 - Layer 4,NAT,VPN, Application Visibility and Control (AVC),User Identity, Next Generation Intrusion Prevention System (IPS),Zero Day Protection / Advance Malware protection, Web Security Essentials / URL Filtering.	
4	Traffic handled	TCP,UDP,HTTP/TCP,TCP/UDP	
5	Hardware Architecture & Performance	The appliance hardware should be a multicore CPU architecture with a hardened 64-bit operating system with min. 4 GB memory. It should also have dedicated NPU-processor with min 2GB RAM for hardware acceleration for network processing The appliance-based security platform should be capable of providing Next Gen Web Protection, Application Control, IPS, DOS, SSL/TLS Inspection & zero-day protection in a single appliance. The quoted should have 300 Mbps SSL/TLS inspection throughput, and 3 GbpsIpsec VPN throughput The firewall Security Heartbeat policies can able to limit access to network resources or completely isolate compromised systems until they are cleaned. Firewall should be IPv6, SD-WAN from day 1	
6	NGFW Throughput (Measured with Firewall, IPS, Application Control enabled)	700 Mbps or higher	
7	Threat Protection throughput (Measured with Firewall, IPS, Application Control, and Malware Prevention enabled)	250 Mbps or Higher	

	Concurrent Session/Concurrent	1.5 M or higher	
8	Connection		
9	New session/Connection per second	35 K or higher	
	General Management	The firewall should support innovative technology for application acceleration.	
		The quoted solution should be ready for extended Detection & Response (XDR) with endpoint, Server protection product from same OEM. Should have single management console for Firewall, Endpoint, Server, email security and cloud security product.	
10		The firewall should have optional data centre selection and flexible user and group policy options on file type, exclusions, and actions on analysis	
		The firewall should support TLS 1.3 inspection of encrypted traffic.	
		It Single client support for IPSec& SSL remote VPN with unlimited free mobile authenticator for android & IOS	
		It should have minimum 100 IPSec& 100 SSL client license from day 1. Should have security heartbeat functionality to reject remote connection if the endpoint health status is malicious.	
11	IPS Features	The firewall should have advance Threat Protection (detect and block network traffic attempting to contact command and control servers using multi-layered DNS, AFC, and firewall). The firewall should security heartbeat instantly identifies compromised endpoints including the host, user, process, incident count, and time of compromise.	
		The firewall should have advanced web malware protection with JavaScript emulation, Live Protection real-time in-the-cloud lookups for the latest threat intelligence	
		The firewall should have URL Filter database with millions of sites across 92 categories backed by OEM Labs	
12	Type of Interface	GE Copper, SFP	
13	Number of 1 GbE Copper RJ 45 interface from day 1	4	
14	Number of 1 G SFP interface from day 1	1	
16	Number of 1/10 GbE SFP+ interface Slot/Module supported for future	0	
17	Number of IPsec VPN Peers supported (Site to Site)	500 or higher	

18	Number of IPsec VPN Peers supported (Client to Site)	100 or higher			
19	Number of SSL VPN Peers supported (Client to Site)	500 or higher			
20	Power Supplies from day 1	Single			
21	Type of Processor	x86			
22	High Availability Support	Yes			
23	Interface Expansion slots supported	0			
24	Firewall Policies - License	Yes			
25	Details of the Firewall Policies for the Firewall provided with the License	Web Security Essentials / URL Filtering, IPS License, Application Visibility License, APT (Advance Persistent Threat) License, Anti Malware Protection, C& C attacks, Geo IP Protection, Zero Day Threat Protection) from day 1			
26	NGIPS Signature supported	5000 or higher			
27	Security Intelligence	IP,URL, Domain			
28	Certification	The quoted firewall should have ICSA or EAL4+ certified. NSS Lab certified with minimum 93% security effectiveness as per last report. Certificates should be enclosed. The quoted firewall should have purpose-built, streamlined user interface and rule management for large rule sets with grouping with at-a-glance rule feature and enforcement indicators. Proposed NGFW should be in Gartner Magic Quadrant in Network Firewall as per the latest report. Should have FIPS certified.			
29		License should include Web / URL / Content Filtering, Application Control and Visibility, IPS, Antimalware, Zero-Day Protection & 24 X 7 hardware & warranty support from the OEM for 36 Months			
	OEM Criteria				
1	OEM Should be ISO	9001 certified			
2	Should have presence	e in India for last 10 years			
3	Should have toll free	, TAC & RMA centre in India			
4	Should have develop	oment & update data centre in India			

	WLAN Controller						
Sr. No	Specifications	Compliance (Yes / No)	Remarks (If Any)				
1	WLAN Controller Architecture		-				

1.1	The wireless controller shall have 5 RJ-45 auto-sensing 10/100/1000 ports ((IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3ab Type 1000Base-T)	
1.2	The wireless controller should one fixed WAN ports & three convertible ports for load balancing Two fixed LAN ports & three convertible ports	
1.4	The device should support 1 Reset Button	
1.5	Shall support IEEE 802.11b/g/n/ac/ax Access Points for centralized management and control	
1.6	The device should support DMZ function for server hosting applications	
1.7	Shall support up to 128 AP's and 128 Users (In Gateway Mode)	
1.8	The wireless controller shall be 1U 19" Rack-Mountable (the rack mounting kit shall be included)	
2	WLAN Controller Mobility Features	
2.1	Shall support fast roaming providing service transparency and fast hand- offs across Access Points within and across subnet boundaries	
2.2	Shall support QoS and security services which follow users as they roam	
2.3	Shall have full service capabilities for wireless networks controlled across the WAN	
2.4	Shall support central configuration of virtual service communities (or SSIDs) QoS, authentication, encryption, and tag VLANs using template	
2.5	The proposed WLAN Architecture shall support distributed traffic forwarding allowing traffic to flow directly from source to destination, eliminating needless traffic to pass through the controller, delivering better performance and faster, more- responsive applications	
2.6	Shall support distributed 802.1x authentication allowing controlled access points to directly authenticate users through an external RADIUS server without controller involvement	
2.7	Shall support WAN failover over multiple WAN connection	
2.8	Shall support Port forwarding for hosting virtual server	
2.9	Shall support VPN or PPTP/L2TP	
2.10	Shall support basic L3 routing features such as Static Routing	
2.11	Shall support separate internal DHCP server can be configured for each LAN port to provide IP address to DHCP client devices	
2	WI AN Controllor Conveity Factures	
3.1	WLAN Controller Security Features Shall support authentication based on user credentials (802.1X/EAP),	
	hardware identifiers (MAC address, WEP key), and HTML login	
3.2	Shall support authentication and authorization through external RADIUS AAA services	
3.3	Shall support built-in stateful firewall for secure connection to Internet	
3.4	Shall support secure management interfaces, including access through CLI/Web	
3.5	Shall support Access Control Lists based on IP address, protocol types and port filtering and URL filtering	
3.6	Shall support VLAN mapping of guest access traffic for secure passage through corporate network	

3.7	Shall have Captive portal for guest user authentication , MAC Authentication , PPPoe Authentication , Web Authentication for users	
4	WLAN Controller Management & Other Features	
4.1	Shall control a network of 64 Access points ensuring consistent security, QoS, and roaming services from AP to AP	
4.2	Shall have scalability consistent in 802.11 a/b/g and 802.11n networks	
4.3	Shall support auto AP discovery, monitoring and configuration throuh CAP/WAP protocol	
4.4	Shall support central management of wireless access point operating modes	
4.5	Shall support plug-and-play auto-discovery and software installation for easy access point deployment	
4.6	Shall have easy-to-use web-based administrator interface	
4.7	Shall support accurate seamless integration with wired network, leveraging existing L2/L3 infrastructure resources, e.g., QoS, and External RADIUS AAA	
4.8	Shall support external RADIUS activity statistics collection per-user for billing by data volume and elapsed session time	
4.9	AC can dynamically adjust uniform distribution of users among different AP using Policy Rules	
4.10	Operating temperature up to 40°C	
5	Product Warranty 3 Years	
6	Product should be Make in India and OEM should have own manufacturing facility in India since 5 Years. The OEM brand should be Indian origin only.	

Server

Sl.No.	Description	Compliance (Y/N)
	Intel® Xeon® E3-1220 v5 (3.0GHz, 4 Core /8MB/ 80W)	
	4 DIMMS /2X8GB / upto 4 drives (3.5 inch) SATA / 2X1TB SATA (3.5 inch) 7.2k RPM	
	Onboard / DVD Writer / 1X inbuilt (250W) /Os Windows Server 2019 x64 Standard	
	Display 20" or higher, Keyboard/ Mouse	

	Services Part:					
Sl.No.	Service Description	UOM	Qnty	Price	Amount	
1	HDPE Pipe Laying underground	Meters	2500			
2	FO Cable laying	Meters	2500			
3	FO Pigtail Splicing and LIU dressing /Mounting	nos	4			
4	UTP cable laying in PVC Conduits	Meters	4880			
5	Rj-45 Jack Crimping	nos	200			
6	Wall Mount Network Mounting	nos	1			
7	Wirless AP Celling /Wall Mounting	nos	70			

8	New Network Switch instllation & Configuration	nos	3	
9	Firwal device Installation& Configuration	Nos	2	
10	Wireless Controller Installation & Configuration	nos	2	
11	Existing Switch Configuration	nos	47	
12	Radius Server Installation and Configuration	nos	1	
13	Project Manegment, Configuration and Documnetation	Lot	1	

Annexure-II

Financial Bid

(Figures in Rs.)

	Materials Part				150100	Ź
SI.						
No.	Materials Description	Make	UOM	Qnty	Price	Amount
1	12 Core SM FO Cable		Meters	2500		
2	40/30 mm HDPE Conduits		Meters	2500		
3	40/30 mm HDPE Couplor		Nos	5		
4	24 Ports Fully Loaded Pigtail ,adaptor LIU		Nos	4		
5	SC-LC Duplex SM FO Patchcord		Nos	8		
6	Cat-6 UTP Patchcable		Nos	10		
7	Cat-6 Cable (305M)		Nos	16		
8	Rj-45 Jack Male		Nos.	200		
9	12 U Network Rack With Fan, Self, PDU and Hardware		Nos.	1		
10	L3 24 Ports Ethernet POE ,4 Ports 10G SFP+		Nos.	1		
11	10G SFP+ Tranreciver		Nos.	8		
12	L2 24 Ports Ethernet POE ,4 Ports 10G SFP+		Nos.	3		
13	Outdoor Acces Point		Nos.	70		
14	Wireless Controller with HA		Nos.	2		
15	Firewall UTM device with HA		Nos.	2		
16	Intel® Xeon® E3-1220 v5 (3.0GHz, / 4 Core /8MB/80W) /4 DIMMS /2X8GB / upto 4 drives (3.5 inch) SATA / 2X1TB SATA (3.5 inch) 7.2k RPM / Onboard / DVD Writer / 1X inbuilt (250W) /Os Windows Server 2019 x64 Standard		Nos.	1		
	Total					

Services Part:					
Sl.No.	Service Description	UOM	Qnty	Price	Amount
1	HDPE Pipe Laying underground	Meters	2500		
2	FO Cable laying	Meters	2500		
3	FO Pigtail Splicing and LIU dressing /Mounting	nos	4		
4	UTP cable laying in PVC Conduits	Meters	4880		
5	Rj-45 Jack Crimping	nos	200		
6	Wall Mount Network Mounting	nos	1		
7	Wirless AP Celling /Wall Mounting	nos	70		
8	New Network Switch instllation & Configuration	nos	3		
9	Firwal device Installation& Configuration	Nos	2		
10	Wireless Controller Installation & Configuration	nos	2		
11	Existing Switch Configuration	nos	47		
12	Radius Server Installation and Configuration	nos	1		
13	Project Manegment, Configuration and Documnetation	Lot	1		
	Total				
	Grand Total				
		Supply	part		
		Service	part		

No	te: The above rates should be inclusive of all t	axes and duties.
		Signature with Stamp of Authorized Person
	Date:	Full Name:
	Place:	Company's Seal:

(Amount in words: Rupees

Tender Response Cover Letter

Original signed copy on company letter head

[Date]

To,
The Registrar,
National University of Study and Research in Law,Ranchi
At Nagri, P.O. – Bukru, P.S. Kanke
Kanke, Ranchi - 834006

Dear Sir.

Subject: Response to Tender for 'Supply, Installation, Testing & Supply of Internet Leased Line'

Having examined the TENDER, the receipt of which is hereby duly acknowledged, we, the undersigned, offer for **Tender for 'Supply, Installation, Testing & Supply of Internet Leased Line'** as required and outlined in the TENDER and agrees to abide by this response for a period of 90 days from the last date for submission of TENDER response.

The following persons will be the authorized representative of our company/ organization for all future correspondence between the NUSRL and our organization till the completion of the project.

Details	Primary Contact	Secondary Contact	Executive Contact
Name:			
Title:			
Company Name:			
Address:			
Phone:			
Mobile:			
Fax:			
E-mail:			

We fully understand that in the event of any change in our contact details, it is our responsibility to inform NUSRL about the new details. We fully understand that NUSRL shall not be responsible for non-receipt or non-delivery of any communication and/or any missing communication from the NUSRL to us, in the event that reasonable prior notice of any change in the authorized person (s) of the company is not provided to NUSRL.

We confirm that the information contained in this response or any part thereof, including its exhibits, and other documents and instruments delivered or to be delivered to the NUSRL is true, accurate, verifiable and complete. This response includes all information necessary to ensure that the statements therein do not in whole or in part mislead NUSRL in its short-listing process.

We fully understand and agree to comply that on verification, if any of the information provided here is found to be misleading, we are liable to be dismissed from the selection process or, in the event of our selection, our contract is liable to be terminated.

We agree for unconditional acceptance of all the terms and conditions set out in this TENDER document.

We agree that you are not bound to accept any response that you may receive from us. We also agree that you reserve the right in absolute sense to reject all or any of the products/ services specified in the TENDER response.

It is hereby confirmed that I /We are entitled to act on behalf of our company /corporation/firm/organization and empowered to sign this document as well as such other documents, which may be required in this connection.

Dated this Day of	_ 2023.
	Signature:
	Name:
	Designation:
	Date:

Annexure-IV

Vendor Information Form

Bidders are requested to furnish the following information and enclose along with quotation.

Agency Name:				
Address of the Agency				
Name & Designation of Authorised person				
Contact information	Mobile no:	Telephone No:	Fax No:	Email:
	Bank de	etails of the Agency	<u>7</u>	
Bank Name				
Bank Address				
Bank Account No				
IFSC Code				
PAN No.				
TIN No.	_		_	_

Signature & Stamp of the Bidder

Date:

Annexure-V

Declaration

1.	I,Son/Daughter of Shri
	Authorized Signatory of competent to sign
	this declaration and execute this bid document.
2.	I have carefully read and understood all the terms and conditions of the bid and hereby convey my acceptance of the same.
3.	The information / documents furnished along with the above application are true and authentic to the best of my knowledge and belief. I/ we, am/ are well aware of the fact that furnishing of any false information / fabricated document would lead to rejection of my bid at any stage besides liabilities towards prosecution under appropriate law.
	Signature:
	Name:
	Designation:
	Date:

Executive summary of the proposed solution

Bidders are required to provide an executive summary of the solution provided along with schematic layout, solution highlights etc.

Deviations Sheet

Please specify any deviations, if any, you wish to seek from the tender conditions. In case of no such mention in this section, it shall be presumed that you accept all scope, terms and conditions of this document.

Technical Deviations:	
Commercial Deviations:	
Any other:	

Annexure-VIII

Authorized Signatory

UNDERTAKING

This is to confirm that we M/s
(give full address)
have not been blacklisted/banned/debarred in any of the government department and public
sector undertaking /enterprise in India and central Vigilance commission, in last three financial
years.
If the above information found false at any stage after the placement of Work Order, NUSRL,
Ranchi (hereinafter called Buyer) will have full right to cancel the Purchase Order and forfeit the
Performance Guarantee. All the direct and indirect cost related to the cancellation of the order
will be borne by us besides any legal action by NUSRL which may be deemed fit at that point of
time.