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No. EI-D/Tech/10-50/2016

ERNET India

(An Autonomous Scientific Society under Ministry of Electronics & Information Technology
(MeitY), GoI)

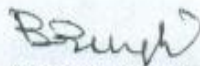
5th floor, Block-I, A Wing

Delhi IT Park, Shastri Park, New Delhi-110053

TENDER NOTICE

ERNET India, an Autonomous Scientific Society under Ministry of Electronics & Information Technology (MeitY), Govt. of India, is a class 'A' Internet Service Provider for the Education and Research Community in India.

2. It is intended to tender for Supply, Installation, Commissioning & Integration of network equipment (active / passive) for establishing Wi-Fi enabled Campus Area Network at Clients site. Interested parties may log on to ERNET website (www.eis.ernet.in) or CPP portal for details/ tender document.


(Bhupal Singh)
Registrar & CPO

ERNET India
(An Autonomous Scientific Society under Ministry of Electronics & Information Technology
(MeitY), GoI)
5th floor, Block-I, A Wing
Delhi IT Park, Shastri Park, New Delhi-110053

(Tele: +91-11- 22170598, FAX: +91-11-22170602)

Tender Enquiry No.: EI-D/Tech/10-50/2016

Dated: 08/12/2016

Pre bid date: 26/12/2016, 11:00 AM

Due Date: 06/01/2017, 03:00 PM

Opening of Bids: 06/01/2017, 03:30 PM

To,

Subject: Tender for Supply, Installation, Commissioning & Integration of network equipment (active / passive) for establishing Wi-Fi enabled Campus Area Network at Clients site.

ERNET India, an Autonomous Scientific Society under Ministry of Electronics & Information Technology, Ministry of Communications & Information Technology, Govt. of India, is a Class 'A' Internet Service Provider for the Education and Research community in India.

1. ERNET India being the National Research & Education Network (NREN) in India provided network and Internet service to educational research institutions. The services are provided through 11 Points of Presence (PoPs) located at the premier education & research institutions across the country. ERNET provides handholding and facilitates projects of educational and research community related to Campus Network, Wi-Fi, ICT, Video Conferencing, Datacenter creation & other ICT &IT related infrastructure for various ministries, departments, academic & research institutions/universities/colleges under central and state Governments.

2. ERNET India wish to empanel reputed system integrators (SI) for implementation of Wi-Fi enabled Campus Area Networks in universities/institutes/organizations. The SI will be selected through this Tender for Supply, Installation, Commissioning & Integration of network equipment (active / passive) for establishing Wi-Fi enabled Campus Area Network at Clients site and related systems, accessories, services, etc.

3. The selected bidder(s) shall be empanelled with ERNET India for a period of 24 months or Rs. 30 Crores order value (whichever will be earlier).The period of empanelment can be extended for a further period of one year as decided through mutual consent subject to the condition that value of contract will be Rs. 30 Crores with an upside of upto 20% i.e. total value will be restricted upto Rs. 36 Crore. However, no minimum order value has been guaranteed by ERNET through this empanelment. Rates quoted shall be valid for the period of empanelment and the extended period for similar specific requirement. The empanelled bidder(s) shall have to enter into a written agreement on a non-judicial

stamp paper of requisite value with ERNET India for honoring all tender conditions and warranty maintenance support, in executing the purchase orders placed by ERNET India.

4. ERNET India may waive any minor infirmity or non-conformity or irregularity in a bid or may seek any clarification on the bids, if so desired. The decision in this regard shall be taken by the concerned evaluation committees & their decision will be final.

5. Sealed bids are therefore invited from the reputed manufacturers or their authorized representatives for empanelment w.r.t supply, installation, Commissioning of equipment & services as per **Annexure-I** in conformity with Technical Specifications as at **Annexure-II**. Interested parties who wish to enter into the empanelment may collect Tender Document in person against a Demand Draft or Banker's Cheque of Rs.10,000/- drawn in favour of “**ERNET India**”, **New Delhi from Shri Ranjan Kumar, Sr. Scientific Officer, ERNET India, 5th Floor, Block – I, A Wing, Delhi IT Park, Shastri Park, Delhi-110053** as per the schedule detailed below:

1	Issue/ Sale of Tender Document	08.12.16 to 15.12.16 (between 10:00 AM to 5:00 PM)
2	Receipt of Queries	Up to 19.12.16 by 11:00 AM (Queries after above date will not be entertained under any circumstance)
3	Pre-bid meeting	26.12.16 (11:00 AM onwards) at ERNET India, 5th floor, Block-I, A Wing Delhi IT Park, Shastri Park, New Delhi-110053
4	Response to Queries	By 30.12.16 (on CPP Portal/ERNET India Website only)
5	Receipt of Bids	Upto 06.01.2017 by 3:00 PM at ERNET India, 5th floor, Block-I, A Wing Delhi IT Park, Shastri Park, New Delhi-110053
6	Opening of Bids	06.01.2017(3:30 PM) at above ERNET India office.

Note : The Tender Document can also be downloaded from CPP portal/ERNET Web site. In such case, an amount of Rs.10,000/- in the form of Demand Draft/Banker's cheque drawn in favour of ERNET India would be required to be furnished along with the Part – I of the bid.

6. Any inquiries regarding clarification/interpretation/contents in connection with this Tender should be sent only in writing to the Registrar, ERNET India at **5th Floor, Block – I, A Wing, DMRC IT Park, Shastri Park, Delhi-110053**. The prospective Bidders must take acknowledgement of all inquiries/queries given in the office of the undersigned.

7. ERNET India shall organize a Pre-Bid meeting on the queries submitted (by stipulated date & Time) by the Bidders on the scheduled date and time at ERNET India. ERNET India may incorporate any changes in the Tender based on acceptable suggestions received during the interactive Pre-Bid meeting or as deemed necessary to achieve the scope of work. The decision of ERNET India regarding acceptability of any suggestion shall be final in this regard and shall not be called upon to question under any circumstances. Only two persons for each intending bidder's organization who will buy the

tender before the pre-bid meeting, will be allowed to attend the Pre Bid Meeting on production of receipt of payment. The prospective Bidder(s), attending the pre-bid meeting will have to submit the photocopy of the receipt of payment made against tender fee to ERNET India.

8. Response/reply to Queries/clarifications received shall be uploaded at CPP portal/ERNET India website/E-procurement Portal. No reply in this regard shall be sent to individual bidders. Bidders are advised to keep visiting CPP Portal/ERNET India Website to get the details in this regard, if any, before submission of their bids on the due date/time.

9. ERNET India may, for any reason, whether at its own initiative or in response to a clarification requested by prospective bidders, modify the Tender Document by an amendment. The same will be posted on CPP/ERNET India's website/E-procurement Portal.

10. **ELIGIBILITY CRITERIA**

a) **For Bidders**

- i. The bidder should have ISO 9001:2008 or equivalent, ISO 27001 or equivalent or better quality certification against each of them. Supporting relevant documentary proof should be enclosed.
- ii. The quoted products should be of latest versions. The products being quoted by the bidder should not be declared as at "end-of-sale" by the respective OEM (Original Equipment manufacturer) within one year of this tender. Undertaking to this effect must be submitted from OEM. The bidder should also submit valid letter from the OEMs confirming following:
 - Authorization for bidder to bid against this tender specifically
 - The products being quoted would not be declared as at "end-of-sale" for the next 1 year from the date of bid submission of this tender document.
 - Undertake that the support including spares, patches, upgrades/updates, etc. for the quoted products/software shall be available for next 5 years from the date of successful installation & acceptance of the project.
 - It must be ensured that all active equipment shall have a life-time of at least 5 years and passive equipment of at least 15 years, the industry practices adopted.
- iii. Bidder should have the experience of successfully executing similar projects in last 5 financial years and must enclose relevant copies of the customer purchase orders along with scope of work, deliverables, time period of execution, project value and satisfactory work completion certificate from client for at-least one similar project of value not less than Rs. 24 Cr. or Two similar projects of value not less than Rs. 12 Cr. each or Three similar projects of value not less than Rs. 9 Cr. each. Copy of purchase orders should be submitted as a proof.

Definition of similar work/ project: Supply, Installation & Commissioning of IT Infrastructure consisting of LAN/WAN/CAN/wireless networks executed in last five years in India.

- iv. The bidder must enclose copy of LAN/WAN/Network work order(s) of laying of minimum 5 Kms of Fibre optical cable with at least 100 Fibre Terminations and 500 UTP nodes in any of the last five years in India.

- v. The bidder must enclose copy of LAN/ WAN/MAN work order(s) having installed 500 access points.
- vi. The Bidder should have been in the business of Networks & IT infrastructure implementation and integration related activities for at least past 5 years. The Bidder shall submit the declaration duly signed and stamped by Bidder's authorized signatory regarding these along with the documentary proofs in the bid. Supporting relevant documentary proof should be submitted.
- vii. The bidder must enclose a copy of at least one LAN/ WAN/MAN work order having 250 ports on data network switches with at least one chassis based layer 3 switch in any of the last five years in India. Copy of purchase orders should be submitted as a proof.
- viii. The bidder should not have been barred or black-listed by any of the central/state govt. departments/organizations/PSUs for any reason on the date of bid submission. A self-declaration certificate from the authorized signatory should be submitted.
- ix. The bidder should have annual average turnover of Rs. 45 Crores in below mentioned three financial years. The Bidder should be profit making company in any one of the last three financial years. The bidder must also have positive net worth as of 31st March 2016. Attested audited copies of the bidders' annual reports for the years 2013-14, 2014-15 and 2015-16 have to be attached along with a certificate from a practicing Chartered Accountant on his letter head confirming annual turnover, net profit, positive net worth & average annual turnover during each of these years.
- x. The bidder should be a Company registered in India under the Indian Companies Act 1956 or a partnership registered under the India Partnership Act 1932 or a Society constituted under any ministry/Department of the Government of India and registered under the Societies Registration Act 1860 with their registered office in India for the last five years as on 31st March 2016. Copy of valid Certificate of Registration attested by Company Secretary/ Authorized Signatory should be submitted by the bidders.
- xi. The bidder should have an office in India support centers manned with qualified engineers across India with a customer support number.
- xii. The bidder may be asked to demonstrate the offered product(s) at a short notice of five working days during the technical evaluation. An undertaking confirming the same should be submitted in this respect.
- xiii. The bidder should give the following unconditional compliance & undertaking for all equipment/services/software which would be procured & installed:

"All the equipment & devices should be properly configured. There should not be any deliberated vulnerability left in the equipment".
- xiv. The Bidder should have a country wide support infrastructure. The Resident Engineer as asked in the tender should be on direct role of the bidder and should be employed by the bidder in compliance with relevant Govt. acts of employment fulfilling statutory obligations including

but not limited to provident fund, ESI, etc. An undertaking to this effect should be submitted by the Bidder.

- xv. All offered products, softwares & components should support seamless inter-operability among them. There should be no compatibility issue among the supplied products, software & components etc. All offered products, softwares & components should be as per IEEE/ITU/WPC/DoT standards where ever applicable. An undertaking to this effect should be submitted by the bidder.
 - xvi. The bidder should be able to provide support services for the faulty systems/subsystem of equipment in conformity with the SLA as defined in this tender document.
 - xvii. All wireless equipment specifications are subject to Indian Government guidelines and any frequency/transmission power/Antenna Gain shall be in conformity with the Govt. rules & guidelines. An undertaking to this effect should be submitted by the bidder.
 - xviii. The bidders must give clause-by-clause compliance for the technical specification of the equipments as in the tender in their technical bids. Also the bidder must give unconditional compliance of all the terms & conditions as mentioned in the Tender document.
 - xix. The bidder must comply with the Integrity Pact (IP) as mandated by CVC, Government of India as a preliminary qualification and sign the Integrity Pact (IP) as given at Annexure-VI of the tender.
 - xx. For smooth, seamless and easy manageability, operation, interoperability and maintenance, the bidder should offer/quote all the switches (Core Switches, & Access Switches) of the same make (OEM) and must be managed by the same NMS offered/quoted.
- b) **For OEM(s)/Manufacturer(s)**
- (i) OEMs whose products (Switches, Wireless Controller & APs, Firewall, IPS & UTM, servers and UPS) have been offered in the bid should have Technical support Centre and should have Toll Free Number to support the equipment. OEM(s) should have direct presence with their office in India manned with engineers for minimum of last 3 years. Relevant documentary proof should be submitted.
 - (ii) The OEM(s) of networking & Wireless equipment being quoted/offered in the tender should have an installed base in India and should have at least one installation of its networking equipment (with minimum 1000 ports on data network switches and at least one chassis based layer 3 switch) & and Wireless (minimum 500 Access Points with Wireless LAN Controller) in India. Relevant documentary proof should be submitted. OEM for WLAN equipment should have installed base of at least 10000 Wi-fi access points in India. Relevant Documentary proof should be submitted. OEM of passive components should have at least one installations with at least 100 fiber terminations and 2000 UTP nodes. Relevant documentary proofs should be submitted.
 - (iii) OEM should authorize maximum of two bidders only. The Bids received with a single OEM from more than two bidders would lead to rejection of all bids of that particular OEM. An Undertaking from OEM to this effect should be submitted.

- (iv) The OEM/bidder must have spares depots in the India with local logistics support and adequate spares for the equipment supplied (Switches, Wireless Controller & APs, Firewall, IPS & UTM, servers, UPS and passive(UTP & OFC) network). This is to ensure immediate delivery of spares parts. The bidder should furnish the details of the physical address and telephone number (s) of the Spares Depot (s).

Note: The Bidders are requested to furnish documents to establish their eligibility for each of the above clauses. Relevant portions, in the documents submitted in pursuance of eligibility criterion mentioned above, may be highlighted. If the tender is not accompanied by all the above documents mentioned, the same may be rejected.

- (v) Upon verification, evaluation / assessment, if in case any information including all documents furnished by the Bidder is found to be false / incorrect, their bid shall be summarily rejected, their EMD shall be forfeited and no correspondence on the same shall be entertained.

THE BID SUBMITTED BY ANY BIDDER NOT FULFILLING THE ELIGIBILITY CONDITIONS / CRITERIA STIPULTED ABOVE, WILL NOT BE CONSIDERED.

11. GENERAL CONDITIONS

- (i) The bidder must be an authorized representative of the products offered. The authority from the manufacturer/OEM must be submitted along with the bid. **The bids received without authority will be rejected outrightly.**
- (ii) Bids should be submitted in two separate **sealed** covers. First cover indicating “**COVER FOR TECHNICAL BID**” should consist of only Bidder’s profile, Compliance sheets with supporting documents, all the documents as asked in support of Eligibility Criteria, technical solution, specification, design, configurations of the system/items offered, un-priced bill of material along with literature, pamphlets, drawing, Signed copy of the Integrity Pact (IP) as given at Annexure-VI of the tender etc. This cover should contain complete technical specifications, make, model, names of supplier/manufacturer and commercial terms etc. of the system/items offered. Price column in this cover should be kept blank. Second cover indicating, “**COVER FOR PRICE BID**” should consist of the price details as per the Price Schedule Format provided in the tender. **All the two covers should first be sealed separately,** and then should be kept **in a single sealed bigger cover.** This cover addressed by name to the officer signing this enquiry should be submitted before due date and time. All the covers should be clearly marked “**Bids for Tender for Supply, Installation, Commissioning & Integration of network equipment (active / passive) for establishing Wi-Fi enabled Campus Area Network at Clients site**”.

Please Note that Prices should not be indicated in the Technical Bid and should only be indicated in the Price Bid.

- (iii) Bids should be valid for a minimum period of 180 days from the due date mentioned below. In exceptional circumstances, the ERNET may request the Bidder(s) for an extension of the period

of validity of the bid. The request and the responses thereto shall be made in writing and transmitted through speed post/registered post/courier/fax. The validity of EMD shall also be required to be suitably extended by the bidder.

- (iv) Envelope should bear the inscription

“Bids for tender for Supply, Installation, Commissioning & Integration of network equipment (active / passive) for establishing Wi-Fi enabled Campus Area Network at Clients site”

“Tender Enquiry No. : EI-D/Tech/..../16

“Due Date & Time:0..--2016 at 3.00 P.M.”

“Due Date & Time for Opening of Bids:..--2016 at 3.30 P.M.

- (v) The Bids must reach the undersigned on or before the due date, i.e., on ..--2016 by 3.00 P.M. Bids received after the due date & time are liable to be rejected. In the event of due date being a holiday or declared Holiday for Central Government offices, the due date for submission of the bids will be the following working day at the appointed time & venue.
- (vi) All items that are to be imported are required to be quoted in US\$ and other items/services/charges are to be quoted in INR for delivery at user sites or at any other place in India as specified by ERNET India free of charge. All prices shall be fixed and shall not be subject to escalation of any description. The rates must be quoted as per the Performa provided in Annexure-III A & Annexure-III B. Annexure-III A & Annexure-III B should be separately filled and submitted in two separate sealed envelopes which should be submitted in one sealed “Cover for Price Bid” as asked in clause 2 of the General Conditions above. Also, during commercial evaluation of the price bid, ERNET India reserves the right to correct any of the arithmetical and/or tax rate errors in the bidders’ price bid subject to the condition that in no circumstances ERNET India will be liable to pay any higher value against the Grand Total Value(GTV) quoted by the L1 bidder. Unit rates will be taken as the base for making arithmetical corrections.
- (vii) ERNET and its user organizations may like to avail custom duty exemptions by providing customs duty exemption certificate. Exemption Letter for Customs Duty, if required, shall be issued by ERNET or its user organization as and when required/asked for by the bidder. The Custom Duty, if any, shall be paid by the bidder and reimbursement will be taken from ERNET or its user organization, subsequent to successful installation and acceptance of all the imported equipments/items for which reimbursement is claimed by submitting the relevant documents. All import of equipment will be facilitated by the bidder only. In case bidder fails to clear the shipment from custom in a timely manner and ERNET is forced to take necessary steps for clearance of goods, then all expenses, damages and penalties will be recovered along with levying of LD from the date of receipt of shipment.
- (viii) Govt. Levies like sales tax, service tax, etc., if any, shall be paid at actual rates applicable on the date of delivery. Work Contract Tax (WCT) wherever applicable shall be deducted by ERNET at source at the rate prevailing on the date of such deduction. Rates should be quoted accordingly giving the basic price, Sales Tax etc., if any as per Annexure-III B. Also for line items as given in annexure I where bidder has to quote a single value for every item for the work of supply as well as installation and commissioning, in such a scenario the bidder has to

explicitly specific the component of supply and services in percentage in the price bid for evaluation of WCT. Please give all the Registration number of the firm along with the applicable taxes which have been shown in the Annexure-IIIB of the tender. In case of change in Tax Regime due to introduction of proposed GST; vendor will not be put in any beneficial situation as compared to that of present Tax Regime. In such a scenario ERNET has the right to ask for submission of proof of deposition of Tax claimed in the invoices before its reimbursement is made.

- (ix) It may specifically be mentioned whether the Bid is strictly as per tender specifications/conditions. If not, deviations must be spelt out specifically. **In the absence of this, the quotation may be rejected.** Deviation on lower side of specifications will not be considered. **No deviations in terms & conditions** of the tender document will be accepted in any case.
- (x) ERNET India reserves the right to accept or reject any bid or cancel the tender proceedings without assigning any reason whatsoever. ERNET India shall not pay any costs incurred in the preparation and submission of any Bid.
- (xi) The bidders should quote the products strictly as per the tendered specifications giving exact models & make under compliance to technical specifications. All the technical literature for the products offered by the bidder may be enclosed in the bid. **Incomplete quotations are liable to be rejected.**
- (xii) Bidder shall sign all pages of the bid document including all enclosures and drawings forwarded with the bid.
- (xiii) The price shall be for delivery at desired destination in India including installation and commissioning and complete operationalization. In case of any discrepancy between rates mentioned in figures and words, the latter shall prevail. The successful bidder(s) shall have to honor all tender conditions and warranty maintenance support, in executing the purchase orders placed against this tender.
- (xiv) The bidder must quote for all the items as mentioned in the **Annexure-I**. The bidder not quoting all the items of **Annexure-I** will be summarily rejected.
- (xv) ERNET India may waive any minor infirmity or non-conformity or irregularity in a bid or may seek any clarification on the bids, if so desired. The decision in this regard shall be taken by ERNET India and its decision will be final.
- (xvi) Any attempt of negotiation direct or indirect on the part of the bidder with the authority to whom he has submitted the tender or authority who is competent finally to accept it after he has submitted his tender or any endeavor to secure any interest for an actual or prospective bidder or to influence by any means the acceptance of a particular tender will render the tender liable to be excluded from consideration. The decision of ERNET India in this regard will be final & conclusive and no queries/communication will be entertained in this regard.
- (xvii) The bidders will have to arrange for all the testing equipment and tools required for installation, testing, maintenance etc.

- (xviii) ERNET India will have the right to reject the components/equipment supplied if it does not comply with the specifications at any point of installation/ inspection and also, if they are not latest.
- (xix) The bidders must give clause-by-clause compliance for the technical specification of the equipments in their technical bids. Also bidders must give clause-by-clause compliance of all the terms & conditions as mentioned in the Tender document. Conditional bid / offer shall not be accepted on any ground and shall be rejected straightway. If any clarification is required, the same should be obtained before submission of the bids.
- (xx) The successful bidder will be required to accept the LoI and enter into a rate contract within 10 days from the date of LoI and submit the security deposit as per clause 18(i) below.

12. INSPECTION

ERNET India shall have the right to inspect or to test the items to confirm their conformity to the ordered specifications. The supplier shall provide all reasonable facilities and assistance to the inspector at no charge to ERNET India. In case any inspected or tested goods fail to conform to the specifications, ERNET India may reject them and supplier shall replace the rejected goods with the goods in conformity with the specification required free of cost to ERNET India. Any delay due to above shall attract relevant penalty clauses of the tender.

13. EARNEST MONEY DEPOSIT

- (i) Each bid must be accompanied by Earnest Money Deposit (EMD) of Rs.30,00,000/- (Rupees Thirty lakhs only) shall be in the form of Demand Draft/Pay Order/EM Fixed deposit/Bank Guarantee of any Nationalized/Scheduled commercial Bank taken in the name of ERNET India, New Delhi. Bank Guarantee should be valid minimum for a period of 180 days from due date of the bid & **be submitted in compliance with the clause no. 25 (xiv)**. The Performa for bid submission of BG is enclosed at annexure – III B. Bids received without Earnest Money Deposit or not confirming to the above and /or with short period of validity are liable to be rejected.
- (ii) Earnest Money is liable to be forfeited and bid is liable to be rejected, if the bidder withdraw or amends, impairs or derogates from the tender in any respect within the period of validity of the tender.
- (iii) If the successful bidder fails to furnish the performance Security as per clause 18 (i) and/or 18(iii) below within 10 days from the date of signing of contract for empanelment and /or placement of the purchase order, the earnest money shall be liable to be forfeited by ERNET India.
- (iv) The earnest money of all successful bidders will be returned after submission of PBG as per clause 18 below. The earnest money of all the unsuccessful bidders will be returned after signing of contract for empanelment and/or placement of order on the selected vendor. EMD

submitted in the form of fixed deposit/BG will be returned as it is. In case of EMD in the form of DD/Pay order, No interest will be payable by ERNET India on the Earnest Money Deposit.

- (v) Bidders have to ensure submission of all BGs as per the latest RBI guidelines & should also ensure compliance with clause no. 25 (xiv).

14. **PAYMENT TERMS:**

ERNET India shall release all payments as detailed below.

- (i) Payment for Items quoted in US\$: 100% would be released through irrevocable Letter of Credit(LC) after acceptance of the Purchase Order by the firm and subject to submission of Proforma Invoice and a Performance Security in conformity with Clause 18 (ii) & (iii) below.
- (ii) Payment in respect of rupee value components: 80 percent (%) payment shall be made by ERNET India after delivery and satisfactory completion of installation, commissioning, integration, testing and acceptance of the complete solution as well as receipt of pre-receipted bill in duplicate. The vendor has also an option to claim 100% payment at this stage through submission of bank guarantee (BG) valid for 39 months and equivalent to 20 % of the value of purchase order to cover the warranty period of 3 years from the date of last acceptance.

If vendor has not opted for 100% payment as above, then balance 20% percent payment of rupee value components of purchase order after deducting all penalties (if any) would be released in 6 equal instalments on half yearly basis during the warranty period (3 years) upon successful completion of every quarter as well as receipt of pre-receipted bill in triplicate.

- (iii) For Passive Components: 80 percent (%) payment shall be made by ERNET India after delivery and satisfactory completion of installation, commissioning, integration, testing and acceptance of the complete solution (including active component) with actual supplied/installed/consumed quantities/items within the overall purchase order (PO) value of the Passive components as well as receipt of pre-receipted bill in duplicate. The vendor has also an option to claim 100% payment at this stage through submission of bank guarantee (BG) valid for 39 months and equivalent to 20 % of the value of purchase order to cover the warranty period of 3 years from the date of last acceptance.

If vendor has not opted for 100% payment as above, then balance 20 (%) percent payment after deducting all penalties (if any) would be released in 6 equal instalments on half yearly basis during the warranty period (3 years) upon successful completion of every quarter as well as receipt of pre-receipted bill in triplicate. In case, there is variation of upto 2% of PO value then no extra payment will be made. In case variation is expected to exceed 2% then a written communication in this regard need to be send for prior approval of Competent Authority in ERNET India.

15. **WARRANTY/AMC**

- (i) Onsite warranty/AMC services will comprise of back to back support from the successful bidder(s). The successful bidder(s) shall furnish the documents from OEM confirming back to back support at the time of acceptance of PO. In case the documents are not submitted, the EMD submitted by the bidder to ERNET India shall be forfeited.
- (ii) Onsite warranty/AMC services shall be provided at the specified locations of installation of equipment supplied.
- (iii) Warranty shall include free maintenance of the whole equipment supplied including free replacement of parts free software upgrades/updates/renewals. Also the warranty shall cover all type of subscription charges/ licence cost associated with any supplied item. The defects, if any shall be attended to on immediate basis but in no case any defect should prolong for more than 24 hours.
- (iv) The comprehensive warranty shall be for a minimum period of three years from the date of acceptance of the equipment by ERNET India.
- (v) The bidders are also required to quote for Comprehensive AMC of two years after warranty period is over. The Comprehensive AMC includes onsite support with parts and software updates/upgrades/renewals. The AMC shall cover all type of subscription charges/ licence cost associated with any supplied item.
- (vi) Work order for AMC of the items, if required, will be issued after satisfactory completion of warranty period. Also the order will be placed on yearly basis only.
- (vii) The bids received without quotes for Comprehensive AMC would be out rightly rejected.
- (viii) AMC cost for two years will also be taken into account for commercial evaluation.
- (ix) Payments for yearly AMC (if awarded) will be released after deducting all penalties (if any) in 2 equal installments on half yearly basis over the period of AMC support upon successful completion of every quarter.

16. SERVICE LEVEL AGREEMENT (SLA):

- (i) After integration & acceptance, during warranty & AMC, the vendor(s) shall be responsible for minimum uptime of 99% on 24x7 basis of the equipment as a whole and shall enter into a SLA for this purpose. The uptime will be calculated over a period of six (06) month time frame.
- (ii) The permissible downtime will further be subject to maximum downtime of 24 hours at a stretch at any instance. In case the same exceeds 24 hours at a stretch then penalty clause at Clause 17 below will be enforced. The same penalty clause will also be enforced in case the downtime exceeds the permissible total downtime as stated above in this clause.
- (iii) In case the user location is inaccessible or for some reason due to no fault of the successful bidder, the downtime cannot be rectified, a communication from the Institute not to deduct the downtime would be required for calculation of penalty.

17. PENALTY CLAUSE FOR NON CONFORMANCE TO ABOVE SLA:

- i) For critical components namely Switch, Wireless Controller & Authentication server: ERNET India may deduct Rs. 1000/- from the due payments or recovered from Bank Guarantee as the case may be for every 1 hours of down time at a stretch or in part up to total down time of 10 hours. This down time shall be calculated over and above the total hours of downtime permissible. Beyond 10 hours of down time, ERNET may deduct Rs. 3000/- from the due

payments or recovered from Bank Guarantee as the case may be for every 1 hour of down time at stretch or in parts. For noncritical components namely Wireless Access Point: ERNET may deduct Rs. 200/- from the due payments or recovered from Bank Guarantee as the case may be for every 1 hours of down time at a stretch or in part up to total down time of 10 hours. This down time shall be calculated over and above the total hours of downtime permissible. Beyond 10 hours of down time, ERNET may deduct Rs. 500/- from the due payments or recovered from Bank Guarantee as the case may be for every 1 hour of down time at stretch or in parts.

- ii) In any case, if the equipment is not made operational for 08 days from the time of reporting of fault, the Bank guarantee submitted by the vendor(s) to ERNET India shall be invoked. Any payments (payable to vendor) shall not be paid too & will be adjusted as penalty. This will be deemed to be an event of default and ERNET India may terminate the contract as per the applicable terms of tender.

18. **PERFORMANCE SECURITY:**

- i) At the time of signing of rate contract, the successful bidder(s) shall be required to submit a security deposit of Rs.20 Lakhs towards adherence of rate contract in the form of Demand Draft/ Pay Order/EM Fixed deposit/Bank Guarantee of any Nationalized/Scheduled commercial Bank taken in the name of ERNET India, New Delhi. The submitted BG should be valid for a minimum period of 27 months from the date of signing of contract and may be invoked in the case of non-adherence of terms of tender/contract. In case vendor(s) fails to submit the security deposit within the specified time period, such an event will be treated as a case of default & suitable necessary action will be taken against the concern vendor. The security deposit / BG will be returned after the successful expiry of rate contract period.
- ii) For US Dollar Value Equipments/goods: In addition to Bank Guarantee(BG) required as per para 18(iii) below, the successful vendor would also submit Bank Guarantee of equivalent amount of Dollar Value Equipments valid for a period of six months before opening of LC within a period of 15 days from date of purchase order, otherwise, LD clause may be made applicable. ERNET may consider to release this BG after satisfactory delivery & acceptance of equipment at end-user site/location and submission of warranty BG. In case of successful installation, Competent Authority in ERNET may consider to release the BG, in case there is a delay beyond 3 months in acceptance of equipment by the user institute without any fault on the part of the bidder. To cover the warranty period on items quoted in US dollar value and paid through LC, the bidder will be required to submit a performance BG equivalent to 20% of value of imported goods to cover the warranty period with 3 months of additional claim period upon successful completion of satisfactory delivery, installation, commissioning and acceptance of equipment at end user site/location and at least 20 days before the expiry of BG submitted towards 100% value of imported items. In case the bidder fails to submit the BG related to warranty for dollar value items, then the BG submitted as above may be invoked.
- iii) The successful bidder shall submit a Performance Security of 10% of the cost of the purchase order at every occasion within 10 days of the placement of purchase order. The Performance Security may be in the form of Demand Draft/Pay Order/Bank Guarantee of any nationalized/scheduled bank. The Bank Guarantee should be valid for a minimum period of 6 months extendable to cover delivery / installation period. In case supplier fails to deliver the items within delivery/ installation period, the Performance Security submitted by the firm is

liable to be forfeited. Performance Security shall be released immediately after the warranty is over. No interest will be payable by ERNET India on the Performance Security.

- iv) The exchange rate for BG will be Telegraphic Transfer (TT) selling rate of the BG issuing bank as on the date of issuance of BG and a certificate to this effect from the concerned bank should also be submitted along with the PBG. In the absence of this certificate, exchange rate on the RBI website for a day prior to the date of issue of BG will be taken as base rate.
- v) The successful bidder has to ensure submission of all BGs as per the latest RBI guidelines.
- vi) Non submission of performance security as per above schedule may lead to cancellation of work order. Also any payment due on ERNET w.r.t work done by the bidder till such date will be forfeited.

19. **DELIVERY PERIOD**

- (i) The successful bidder(s) have to complete the delivery of all imported items in US\$ within 10 weeks from the latest due date of submission of security deposits as per clause 18 (ii) & (iii) excluding the period of opening of LC by ERNET India. Any delay by the supplier in the performance of delivery of items shall render the supplier liable to any or all of the following sanctions-forfeiture of its i) Earnest Money Deposit, performance security as per clause 18 ,ii) imposition of liquidated damage as per clause 20 below or/and iii) cancellation of the purchase order for default.
- (ii) Equipment/goods will be directly supplied at specified sites for installation. All the expenses involved in shipping the equipment to the universities/Institutes/organization will be borne by the bidder. All aspects of safe delivery shall be the exclusive responsibility of the bidder. ERNET will have the right to reject the component/equipments supplied, if it does not comply with the specifications at any point of installation/inspections.
- (iii) The successful bidder(s) have to complete the delivery (installation, commissioning, testing & acceptance of the ordered items (including active & passive equipment) as per the scope of work within 24 weeks from the date of respective purchase orders. For delivery of imported items clause 19(i) will be applicable.

20. **LIQUIDATED DAMAGES(LD)**

In the event of the Bidder's failure to deliver / install & commission/ acceptance of the solution by the date/dates specified in this tender document or any extended period, ERNET India may at its discretion withhold any payment, as liquidated damages and not by way of penalty at the rate of 2% of the value of purchase order per week or a part of a week subject to a maximum of 10%. The amount towards Liquidated Damage would be recovered from any due payment / amount of Bank Guarantee as required vide clause 18 above. The LD will not be imposed in case the delay is not on part of the bidder.

21. Rates quoted by the bidder shall be final and no negotiation will be held. However, it would be subject to the discretion of the Competent Authority in ERNET India.

22. **CANCELLATION OF TENDER**

ERNET India reserves the right to cancel the tender or modify the requirement without assigning any reason. ERNET India will not be under any obligation to give clarifications for doing the aforementioned.

23. ERNET India also reserves the right to modify/relax any of the terms & conditions of the tender by declaring / publishing such amendments in a manner that all prospective vendors / parties to be kept informed about it.

24. ERNET India in view of project requirement may reject any tender(s), in which any prescribed condition(s) is/are found incomplete in any respect and at any processing stage.

25. **SPECIAL TERMS AND CONDITIONS**

(i) Keeping in view the ERNET project commitments, ERNET reserves the right to evolve a super-set of technically qualified accepted systems and subsystem, items of their brands and models for the entire range of systems covered by the Annexure-I of this tender so as to take care of the service delivery related aspects concerning the suitability of configuration needs matching the project requirements from time to time.

(ii) In the event of an successful bidder or the concerned division of the bidder is taken over /bought over by another company, all the obligations and execution responsibilities under the agreement with the ERNET, should be passed on for compliance by the new company in the negotiation for their transfer.

(iii) If the name of the product is changed for describing substantially the same in a renamed form; then all techno-fiscal benefits agreed with respect to the original product, shall be passed on to ERNET and the obligations with ERNET taken by the successful bidder(s)with respect to the product with the old name shall be passed on along with the product so renamed.

(iv) In case of successful bidder(s) is found in breach of any condition(s) of tender or supply order, at any stage during the course of supply / installation or warranty period, the legal action as per rules/laws, shall be initiated against the bidder(s) and EMD/Security Deposits shall be forfeited, besides debarring and blacklisting the bidder(s) concerned for at least three years, for further dealings with ERNET India.

(v) The selected bidder(s)should not assign or sublet the work order or any part of it to any other agency in any form. Any such eventuality shall result in termination of purchase order and forfeiture of Security Deposit/EMD concerning such bidder(s).

(vi) ERNET may, at any time, terminate the PO by giving written notice to the successful bidder(s) without any compensation, if the empanelled bidder(s) becomes bankrupt or otherwise insolvent, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to ERNET.

- (vii) No deviations from these terms and conditions will be accepted; violation thereof will lead to rejection of the bid and forfeiture of EMD/Security Deposit.
- (viii) Before the award of work to successful bidder(s), successful bidder(s) will have to complete site survey of their respective sites allocated to them and submit the survey report to ERNET along with exact bill of material within 10 days from the date of request for such a survey.
- (ix) ERNET India will empanel & award the work to maximum of three successful bidders in the ratio proportion as specified at clause 26 this tender, however the division of order will be subject to the condition that none of the single user site will be divided among multiple successful bidders to ensure smooth management and operational issues.
- (x) The successful bidder(s) shall ensure adherence to SLA terms and conditions as specified in this tender and adherence to all aspects of fair trade practices in executing the purchase orders placed by ERNET India on behalf of its customer/users.
- (xi) The vendor(s) should not assign its contractual obligations either in whole or in part of the ERNET's work order to any other agency in any form. Any such eventuality may result in termination of contract and forfeiture of Security Deposit concerning such bidder(s).
- (xii) If L1 bidder refuses/fails to accept the Letter of Intent (LoI) and enter into a rate contract within the stipulated time the offer would be treated as withdrawn and bidder's EMD will be forfeited, besides debaring and blacklisting the bidder for at least three years, for further dealings with ERNET India. In such a case, the tender process will stands cancelled.
- (xiii) It is the bidder's responsibility to ensure the completeness of the solution as defined in the clause 2 of the tender document..
- (xiv) In view of guidelines issued from ministry of finance, it is mandatory that all the Bank Guarantees submitted under this tender must be routed through Structured Financial Messaging System (SFMS) from issuing Bank to our Bank by sending IFN 760 COV Bank Guarantee Advice Message. Thereafter only physical Bank Guarantee will be acted upon. Our bank details for this purpose are: -

1.	Beneficiary Name & Address	ERNET India 5th Floor, Block I A Wing DMRC IT Park, Shastri Park, Delhi-110053
2.	Bank Name	Bank of India
3	Bank Branch & Address	Electronics Niketan 6 CGO complex New Delhi – 110003
4	Beneficiary Account No	604810100002033

5	IFSC code	BKID0006048
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26. EVALUATION OF TENDER

- (i) Tender process intends to empanel maximum of 3 (Three) vendors through this process. However, the decision of ERNET shall be final in this regard.
- (ii) The evaluation process of the tender proposed to be adopted by the ERNET India is indicative only and to provide the Bidders an idea of the evaluation process that the ERNET India may adopt. However, the ERNET India reserves the right to modify the evaluation process at any time during the Tender process, without assigning any reason, whatsoever, and without any requirement of intimating the Bidders of any such change.
- (iii) When deemed necessary, during the evaluation process, the ERNET India may seek clarifications or ask the Bidders to make Technical presentations/demonstrations on any aspect from any or all the Bidders. However, that would not entitle the Bidder to change or cause any change in the substance of the tender submitted or price quoted.
- (iv) A duly constituted Technical Evaluation Committee (TEC) will first select eligible Bidders on the basis of eligibility criteria of this tender. The Bids conforming to the eligibility criterion will then be considered for further evaluation.
- (v) Technical Evaluation Committee (TEC) will shortlist Technical Bids on the basis of technical solution, design, conformity of technical specifications, parameters and features offered vis-à-vis tendered specifications requirements. If required, the short listed Bidders may be asked for a detailed technical presentation/discussion on the solution and products offered in the bid. Further, TEC may ask the bidder to bring any selected items/sub items of their quoted products for technical evaluation at ERNET India or any other location decided by TEC in specified time limit. In case, vendor fails to bring their quoted products within the stipulated time, for whatever reasons, their bid will not be considered for further evaluation. The names of technically shortlisted bidders will be announced to only those bidders who's bids will qualify for opening the Price/Commercial Bids.
- (vi) In their own interest the bidders are advised to ensure that the goods/equipments quoted by them should conform to all tendered technical parameters/specifications and are functional. Goods/Equipments quoted and not meeting complete tender specifications will not be considered for evaluation. For the evaluation purpose, ERNET India reserves the right to visit at a short notice to any similarly implemented site as claimed by the bidder.
- (vii) The Price Bids of only those Bidders short listed from the Technical Bids by TEC will be opened in the presence of their representatives, if available on a specified date and time to be intimated to the respective Bidders by ERNET India, and the same will be evaluated by a duly constituted Commercial Evaluation Committee (CEC).
- (viii) A tentative sample Bill of Material as in Annexure-I has been prepared & enclosed herewith for reference. The technically short listed bids will be evaluated on the basis of price quoted by

bidders as per Bill of Material (BOM) as in Annexure-I enclosed in the tender. The bidder should quote for attached BOM covering following points:-

- All the items as at Annexure-I.
 - Support as per SLA terms
 - Comprehensive Warranty of three years
 - Quote for comprehensive AMC of two years (on per year basis) after warranty period is over.
- (ix) The items & quantities provided in Annexure-I are only for calculation purposes for deciding L1 (Lowest price bid). The actual quantity and/or items may vary as per the feasibility/requirement at every site. The decision of ERNET India in this regard shall be final.
- (x) The commercial evaluation of the bids will be done on the basis of ownership of solution for period of five years.
- (xi) The Bidder must quote for all the items as mentioned in the **Annexure-I**. The bidder not quoting all the items of **Annexure-I** will be summarily rejected. The price comparison shall be made on the total of Annexure-I to determine L1(lowest) price bid. ERNET India has the right to choose any item / combination of items from annexure - I for placement of purchase orders. The purchase orders will be placed as per the actual requirements for the items/sub-items& quantities on the unit rates finalized against this tender.
- (xii) Criteria for deciding L1 bidder and lowest unit rates for each item is as follows:

The lowest quoting vendor (L1) will be determined as mentioned below:

- A. First Annexure-III A will be opened for all the technically qualified bidders on a specified date in presence of their representatives.
- B. L1, L2, L3 bidders will be decided on the Gross Total Value (GTV) of this Annexure-III A.
- C. After the L1 bidder is decided on the Gross Total Value (GTV), Annexure-III B submitted by L1 Bidder will be opened for deciding the lowest individual unit item rates for all the items of Annexure-I of this tender.
- D. In case L1 bidder has failed to quote for all the items in Annexure-III B, his bid will be rejected and his EMD will be forfeited and the Annexure-III B of the next lowest bidder would be considered and so on.
- E. In the event of any mismatch in the GTV value mentioned at Annexure-III A and total of Annexure-III B of the L1 Bidder, the following criteria will be adopted to remove the discrepancy between these two values:
 - a) When Grand Total Value given in Annexure-III A is greater than the Grand Total Value given in Annexure-III B, the value given in Annexure-III B will be taken as the value for Annexure-III A.
 - b) When Grand Total Value given in Annexure-III A is less than the Grand Total Value given in Annexure-III B, the value given in Annexure-III B will be replaced with the value given

in Annexure-IIIA and the item wise value for each item in Annexure-IIIB will be reduced on Pro-Rata basis and consequently unit values will be worked out & fixed.

- F. If L1 bidder fails to accept the individual unit rates rationalized as per the above procedure, his bid will be treated as cancelled and EMD of such defaulting bidder will be forfeited and the Annexure-IIIB of the next lowest bidder would be considered.
- G. Thus the L1 bidder and the lowest unit rates (for individual items/services) shall be decided as per the procedure mentioned above. After deciding the L1 bidder & lowest unit rates as above, the work will be awarded as per the following procedure:
- a) The maximum of three bidders will be empaneled at L1 rates subject to availability of technically qualified bidders and acceptance of L1 package price by L2 and L3 bidders. After discovering of L1 price, L2 and L3 bidders (as the case may be) will be given an option to match the package price quoted by L1 bidder. The L2 and L3 bidders or as the case may be will have to reply within 7 days in respect of their acceptance / non-acceptance of the L1 rates. In case no reply is received from their side within stipulated time lines, the ERNET's offer will be deemed to be accepted by them and thereafter non-acceptance of LoI / any terms of tender will be treated as breach of contract. In the event of breach of contract, bidder(s)'s EMD/ security deposit will be forfeited, besides debarring and blacklisting the bidder for at least three years, for further dealings with ERNET India.
 - b) In case any of the bidder (s) (L2 & L3), refuses to match the L1 rates in totality, the next onward bidder(s) (if technically qualified) will be given an option to match the L1 rates on same terms and conditions.
 - c) The bidder(s) (other than L1) who will refuse to match the L1 price will be disqualified and their EMD will be returned.
 - d) In case L2 & L3 bidders accept & match the L1 price, all the bidders (L1 to L3) will be empaneled and the purchase orders (subject to the ERNET's user requirement) shall be released as per the following :

S. No.	Number of technically qualified bidders who agree to match the L1(below)	L1 (%)	L2 (%)	L3 (%)
1	if work is awarded between 3 bidders	45	30	25
2	if work is awarded between 2 bidders	60	40	-----
3	if work is awarded to 1 bidders	100	-----	-----

- e) If at any stage of empanelment / any time thereafter the successful bidder(s) fails to accept/ execute the work order, their share of work will be redistributed among the rest available empaneled bidder(s). This will be subject to the clause 25 (xii).
- f) The above ratio will be subject to the condition that none of the single user site will be divided among multiple successful bidders to ensure smooth management and operational issues. The % (percentage) distribution shall be to the nearest approximation possible and will be calculated over the completion of every year from the date of signing of contract.

Note: In their own interest the bidders are advised to ensure that the equipments quoted by them should conform to all tendered technical parameters/specifications and are

functional. Equipment quoted and not meeting complete tender specifications or lower in specification will not be considered for evaluation.

27. SCOPE OF WORK

- (i) The bidder will carry out the work at Universalities / organizations as specified by ERNET across India and will be responsible for total system integration and execution of project.
- (ii) The bidder will try & reuse the item available to the extent possible subject to its functionality & feasibility.
- (iii) The bidder will carry out the feasibility sites surveys, prepare the drawings, laying & cable route plans, rack locations, node placement, Wi-Fi access points placement, etc. for the Wi-Fi enabled Campus Network infrastructure in consultation with ERNET/University/ Organization.
- (iv) The bidder will design, supply, install, commission, integrate and does maintenance of Wi-Fi enabled Campus Network & other IT Infrastructure as per requirement inconformity with Schedule of Requirement (Annexure-I) (any subset of items & quantities), Technical Specifications (Annexure-II) and terms & conditions of the tender. The bidder will ensure to install the supplied systems and make it operational on the network and provide maintenance for three years.
- (v) The bidder shall deliver and implement the technologies inconjunction with a set of best practices guidelines & industry standards.
- (vi) The bidder will ensure smooth integration of the offered equipment with any existing equipment/network at User sites/locations specified.
- (vii) The bidder will provide user manual to end-user detailing operations of the equipment and on-site user level training at the time of installation.
- (viii) The bidder will submit a detailed implementation plan after consultation with ERNET/End-user within one week from the date of purchase order.
- (ix) The Bidder has to ensure that during the execution of the project they do not damage or disrupt the existing services under and above the ground.
- (x) The Bidder has to comply with the security policy of the user organization and its non-disclosure agreement.
- (xi) The methodology of conduiting & cabling and installation work, to be adopted, has to ensure minimum damage to the existing finish and no loss to the aesthetic beauty of the floors & Walls. Any damage to the existing flooring / walls etc. shall be made good by the bidder.
- (xii) The bidder shall organize technical training about the Wi-Fi Campus Network equipment after installation and commissioning has been completed. Training will be provided on no additional

cost for a batch of 10-12 officials / staffs for 2 days at the place of installation. All the training material will be provided by the bidder under approval by ERNET authority.

- (xiii) The bidder will ensure the availability of services from professionally qualified team during implementation of the project and to provide the required on-site warranty & maintenance for a period of three years.
- (xiv) The Bidder will be liable for any hardware and software up-gradation for maintenance without any extra cost during warranty period.
- (xv) On completion of the work the bidder shall submit the detailed diagram/drawings & documentation of the project to the University/organization/ERNET and obtain a duly certified completion certificate from the user organization, which will be submitted to ERNET India along with the bills.

28. **INDEMINITY**

The selected bidder shall indemnify the University/Organization/ ERNET departments against all third party claims of infringement of patent, trademark/copyright or industrial design rights arising from the use of the supplied items and related services or any part thereof. ERNET India/End-user department stand indemnified from any claims that the bidder's manpower may opt to have towards the discharge of their duties in the fulfillment of the purchase orders. ERNET India/End-user department also stand indemnified from any compensation arising out of accidental loss of life or injury sustained by the bidder's manpower while discharging their duty towards fulfillment of the purchase orders. The bidder shall solely responsible for any damage, loss or injury which may occur to any property or to any person by or arising out the execution of the works or temporary works otherwise than due to the matters referred to in this agreement hereinbefore. The bidder would ensure for observance of all labor and other laws applicable in the matter and shall indemnify and keep indemnified the University/Organization/ ERNET against the effect of nonobservance of any such laws.

29. **FORCE MAJEURE**

If at any time, during the continuance of the empanelment, the performance in whole or in part by either party of any obligation under the empanelment is prevented or delayed by reasons of any war, hostility, acts of public enemy, civil commotion, sabotage, act of terrorism, fires, floods, explosions, epidemics quarantine restrictions, strikes, lockouts or acts of God (hereinafter referred to as "events"), provided notice of happenings of any such event is duly endorsed by the appropriate authorities/chamber of commerce in the country of the party giving notice, is given by party seeking concession to the other as soon as practicable, but within 21 days from the date of occurrence and termination thereof and satisfies the party adequately of the measures taken by it, neither party shall, by reason of such event, be entitled to terminate the empanelment, nor shall either party have any claim for damages against the other in respect of such non performance or delay in performance, and deliveries under the empanelment shall be resumed as soon as practicable after such event has come to an end or ceased to exist and the decision of the purchaser as to whether the deliveries have so resumed or not, shall be final and conclusive, provided further, that if the performance in whole or in part or any obligation under the empanelment is prevented or delayed by reason of any such event for a period exceeding 60days, the purchaser may at his option, terminate the empanelment.

30. **TERMINATION FOR DEFAULT**

- (i) Default is said to have occurred
 - a. If the bidder fails to deliver any or all of the services within the time period(s) specified in the purchase order or any extension thereof granted by the competent authority.
 - b. If the bidder fails to perform any other obligation(s) under the contract.
- (ii) If the bidder, in either of the above circumstances, does not take remedial steps within a period of 30 days after receipt of the default notice from ERNET India (or takes longer period in spite of what has been authorized in writing), the empanelment / purchase order would stand terminated in whole or in part. In addition to above, the following actions can be taken:

The procurement can be done, upon such terms and in such manner, as is deemed appropriate, goods similar to the undelivered items/products and the defaulting bidder shall be liable for compensation for any extra expenditure involved towards goods and services to complete the scope of work in totality and 20% of the total value of purchase order as cancellation charges towards Liquidated Damages (LD) as specified in para 26.

- (iii) The purchase order / empanelment can be terminated by giving one month written notice to the bidder, without any compensation to the bidder, if the bidder becomes bankrupt or otherwise insolvent.

31. **ARBITRATION**

- i. In case any dispute or difference arises out of or in connection with or the carrying out of works (whether during the progress of the works or after their completion & whether before or after the termination, abandonment or breach of contract) except as any of the accepted matters, provided hereunder, the parties hereto, shall first endeavor to settle such disputes of differences amicably.
- ii. If both the parties fail to reach such amicable settlement, then either party (The Purchaser or Bidder) may (within 20 days of such failure) give a written notice to the other party requiring that all matter in dispute or difference be arbitrated upon. Such written notice shall specify the matters which are in dispute or differences of which such written notice has been given and no other shall be referred to the arbitration of a single arbitrator, to be appointed by both the parties or in case of disagreement as to the appointment of a single arbitrator, to that of two arbitrators, one to be appointed by each party or in case of said arbitrators not agreeing then, to the umpire to be appointed by the arbitrators in writing before entering upon the references. Provisions of Indian Arbitration & Conciliations Act, 1996 or any statutory modification or reenactment thereof and rules framed there under from time to time shall apply to such arbitration.
- iii. Venue of arbitration shall be New Delhi.
- iv. The arbitrators or arbitrators appointed under this Article shall have the power to extend the time to make the award with the consent of parties.

- v. Pending reference to arbitration, the parties shall make all endeavors to complete the work in all respect. Disputes, if any, will finally be settled in the arbitration.
- vi. Upon every or any such references to the arbitration, as provided herein the cost of and incidental to the reference and Award respectively shall at the discretion of the arbitrator, or the umpire, as case may be.
- vii. The award of arbitrator or arbitrators, as the case may be, Shall be final and binding on the parties. It is agreed that the Bidder shall not delay the carrying out of the works by reason of any such matter, question or dispute being referred to arbitration, but shall proceed with the works with all due diligence. The Purchaser and the Bidder hereby also agree that arbitration under this clause shall be the condition precedent to any right of action under the contract except for as provided for in the Tender.

32. **APPLICABLE LAW**

- (i) The bidder shall be governed by the laws and procedures established by Govt.of India, within the framework of applicable legislation and enactment made from time to time concerning such commercial dealings/processing.
- (ii) All disputes in this connection shall be settled in Delhi jurisdiction only.
- (iii) ERNET India reserves the right to cancel this tender or modify the requirement without assigning any reasons. ERNET India will not be under obligation to give clarifications for doing the aforementioned.
- (iv) ERNET India also reserves the right to modify/relax any of the terms & conditions of the tender.
- (v) ERNET India, without assigning any further reason can reject any tender(s), in which any prescribed condition(s) is/are found incomplete in any respect.
- (vi) ERNET India also reserves the right to empanel on quality/technical basis, which depends on quality/capability of the system and infrastructure of the firm. Bidder(s) are, therefore, directed to submit the tender carefully along with complete technical features of the products/systems as well as other documents required to access the capability of the bidder.

33. **CARE OF WORK**

From the commencement to the completion of the works, the bidder should ensure to take full responsibility for the care thereof and of all temporary works and in case any damages loss or injury happens to the works or to any part thereof or to any temporary works due to lack of precaution or negligence on the part of Bidder, the loss shall be made good at its own cost.

34. **DAMAGE TO PERSON AND PROPERTY**

The bidder shall (except, if and so far as this agreement provides otherwise), indemnify and keep indemnified the ERNET/ User Organization against all losses and claims for injuries or damage to any person or property arising out of or in consequence of the construction and maintenance of the works by them and against all claims demands, proceedings, damages, loss charges and excesses whatsoever in respect of or in relation thereof.

35. DOMESTIC MANUFACTURER CLAUSE

- (i) Preference will be given to domestically manufacture electronic goods in procurement. Guidelines as per Govt. notification No. 8(78)/2010-IPHW dated 10-2-2012, and subsequent amendments/clarifications will be followed for implementation. Bidders must submit an undertaking on notarized Rs. 100/- stamp paper as per Annexure-V: PMA AFFIDAVIT mentioning the percentage of domestic value addition (in terms of BOM) for each quoted item/product under a schedule to avail any applicable preference at the time of placing of purchase orders.
- (ii) Bidders who do not provide the undertaking shall not be considered for receiving this preference.
- (iii) The empanelment of bidders quoting false information will be cancelled and the EMD will be forfeited.

36. DEFECT LIABILITY PERIOD

The bidder shall arrange for maintenance during the period of warranty from the date/dates of commissioning of equipments with regard to rectification/removal of defects if any observed during this period. If the bidder does not arrange to rectify the defects observed during the maintenance period within a reasonable time, the ERNET shall be at liberty to get such defects rectified at the cost and risk of the bidder.

37. PERT/CPM/TIME SCHEDULE CHART

At the outset of the works, the bidder will submit a Pert/CPM/Time schedule chart bringing out completion of various activities in the project for approval of Tenderer. Thereafter, the bidder will submit monthly implementation progress for each of the assigned project. While getting the project executed, apart from adherence to time schedule the bidder shall strictly adhere to quality norms applicable. In case of delay of the project and/or non adherence to the norms as set in the tender, suitable penalty clauses as per tender will be attracted.

38. MISCELLANEOUS

- (i) The empanelment under this tender is not assignable by the selected bidder(s). The selected bidder(s) shall not assign its contractual authority to any other third party. The selected bidder(s) shall be obliged to render services /supplies to Universities/Organization/ERNET. Any default or breach in discharging obligations under this tender by the selected bidder(s) while rendering services / supplies to User Organization, shall invite all or any actions / sanctions, as the case may be, including forfeiture of EMD, security deposit, invocation of performance guarantee stipulated in this tender document.

- (ii) The decision of ERNET India arrived at as above will be final and no representation of any kind will be entertained on the above. Any attempt by any Bidder to bring pressure of any kind, may disqualify the Bidder for the present tender and the Bidder may also be liable to be debarred from bidding for ERNET India tenders in future for a period of at least three years.
 - (iii) Any conditions mentioned in their tender bids by the bidders which are not in conformity to the conditions set forth in the tender will not be accepted by ERNET India. All the terms and conditions for the supply, testing and acceptance, payment terms penalty etc. will be as those mentioned herein and no change in the terms and conditions set by the bidders will be acceptable. Alterations, if any, in the tender bid should be attested properly by the bidders, failing which the bid will be rejected.
 - (iv) ERNET India reserves the right to modify and amend any of the above-stipulated condition/criterion depending upon Project priorities vis-à-vis urgent commitments. ERNET India also reserves the right to accept /reject any bid, to cancel / abort tender process and / or reject all bids at any time prior to award of empanelment, without thereby incurring any liability to the affected agencies on the grounds of such action taken by the ERNET India.
 - (v) Any default by the bidders in respect of tender terms & conditions will lead to rejection of the bid & forfeiture of EMD/Security Deposit.
39. This Tender document is not transferrable. Bidders are advised to study the tender document carefully. Submission of bid shall be deemed to have been done after careful study and examination of the tender document with full understanding of its implications. The response to this tender should be full and complete in all respects. Incomplete or partial bids shall be rejected. Bidders shall bear all costs associated with the preparation and submission of the bid, including cost of presentation and demonstration for the purposes of clarification of the bid, if so desired by ERNET. ERNET India shall in no event be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

Yours faithfully,

Registrar & CPO
ERNET India

Bill of Material**A. Active Equipment & Components**

S.No.	Description	Total Device
Switch Type 1		
1	Core Switch along with redundant switchfabric/CPU/management, RPS and all other accessories with following modules/components:	1
A	1000 Base-LX single mode fiber ports	8
B	10G Base-LR Single mode fiber ports	8
C	24 Ports 10/100/1000 Base-T Ports	2
D	24 x 10G SFP+ line card	1
E	24 x 24 x 1G SFP line card	1
Switch Type 2		
2	48x 1000 Base SFP and 4 Ports 10G SFP+ along with internal RPS and necessary accessories with following modules / components:	4
A	1000BaseT SFP	48
B	1000 Base-LX single mode fiber ports	40
C	10G Base-LR Single mode fiber ports	16
Access Switch (PoE & non PoE)		
3	24 port POE 10/100/1000 BaseT RJ45 and 2x 1/10G SFP+ ports along with necessary modules / components:	40
4	24 port 10/100/1000 BaseT RJ45 and 2x 1/10G SFP+ ports along with necessary modules / components:	106
A	1000BaseT SFP	48
B	1000 Base-LX single mode fiber ports	40
C	10G Base-LR Single mode fiber ports	16
Wireless Controller Type 1		
5	Wireless LAN Controller/switch with all accessories and Management software	5

Wireless Controller Type 2		
6	Wireless LAN Controller/switch with all accessories and Management software	2
Wireless Controller Type 3		
7	Wireless LAN Controller/switch with all accessories and Management software	1
8	Additional licenses for 50 Access Points	
Wireless Access Points		
9	Wireless Access Points supporting 802.11a/b/g/n/ac and with dual antenna -Indoor	430
10	Wireless Access Points supporting 802.11a/b/g/n/ac and with antenna - Outdoor	17
IT Infrastructure - Central site		
11	Firewall: Appliance based	1
12	IPS: Appliance based	1
13	Unified Threat Management (UTM)	1
14	Latest Servers with Windows server 2008 or latest	1
15	Latest Servers with Enterprise Linux Server	1
16	KVM switch, Keyboard & display	1 Each
17	Racks for above with fans, power strips, doors, cable managers, accessories, etc	1
Uninterrupted Power Supply (UPS)		
18	10KVA online UPS with 1 hour battery backup	1
19	5KVA online UPS with 1 hour battery backup	1
20	1KVA UPS with 30 minutes battery backup	1
21	Point to Point (PTP) Radio Set along with accessories (2.4/ 5.8 GHz but either should be available on demand) of 200 Mbps Aggregate throughput coverage up to 10 Km with Integrated or External Antenna	10
22	Point to Point (PTP) Radio Set along with accessories (2.4/ 5.8 GHz but either should be available on demand) of 50 Mbps Aggregate throughput coverage up to 5 Km with Integrated or External Antenna	10
23	Radio Path survey for new links	1
24	Resident Engineer for facility management for 8 hours shift per day with 3 years Diploma/degree in the relevant field and at least 2 years experience in the configuration, management and troubleshooting of LAN and IT infrastructure being provided under the project.(per year	1

	basis)	
25	Annual comprehensive maintenance charges per year in percentage (%) for 2 years after three years of warranty period is over (unit in year)	2

26	Any other item-please specify	
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B. Passive Components

S.No.	Description	Denomination	Qty
1	Feasibility Study, Site Survey, project plan specifying layout plan of Network components and Bill of Material of the Network devices & equipment, etc.	per site	1
2	Supply & Fixing of 1", 1.5" PVC duct (Pipe) for UTP cables – (ISI Marked)		
i)	1 inch	per meter	17950
ii)	1.5 inch	per meter	10760
3	Supply & Fixing of PVC duct (Channel) for UTP cables - (ISI marked)		
i)	1 inch	per meter	10760
ii)	1.5 inch	per meter	5020
iii)	2 inch	per meter	3580
4	UTP Cable Laying	per meter	71760
5	Installation of 24 Port Jack Panels & termination of UTP Cat6 cable on Jack Panel	per unit	125
5a	Labeling of jack panels 24 ports) and nodes	per unit	125
6	Installation & termination of information outlets(includes termination Cat 6 cables on I/O)	per node	1020

7	Testing of laid cables for the nodes(UTP)	per node	1020
8	Supply & installation of 19” Surface & Wall Mount Racks with platform& proper support for brackets, Racks filled with Casters, Front & rear doors, Power distribution unit & Fans. Cable Manager		
i)	12U	per unit	40
ii)	27U	per unit	8
iii)	42U	per unit	8
9	Installation & termination of single mode fiber optic cable (Armored12 core) and cabling components		
i)	Fiber Optic cable laying with cable root marker and with route survey and documentation	per meter	4240
ii)	Supply, Installation and fixing of GI pipe underground and on the surface, Class B Type(ISI marked)		
	1) 1 inch	per meter	630
	2) 2 inch	per meter	410
iii)	Excavation & resurfacing of soil upto 1 meter depth		
	Hard Soil/concrete	per meter	410
	Soft Soil	per meter	2540
v)	Supply & Installation of HDPE Pipe – ISI/TEC Approved		
	40/33mm HDPE Duct Pre lubricated	per meter	3390
	120mm dia DWC pipe across the road by trench less method	per meter	210
vi)	Cable pulling pit made of reinforced concrete & brick walls with removable covers (stone/slab)	per unit	45

vii)	SC connector/pigtail splicing/termination on fiber optic cable (with support of proper buffer tubing & termination of fibers in Fiber Termination/Interconnection unit with SC couplers)	per connector	780
viii)	Performance testing of laid Fiber optic cable (per core) for continuity, length, & optical power loss as per EIA/TIA 568 & EIA-TIA - 455-60 or latest and documentation of the results.	per core	380
10	Supply of UTP Cable & components		
i)	Cat6 Cable LSZH	per meter	71760
ii)	Cat6 I/O Datagate Jack shuttered	per unit	1020
iii)	Cat6 Jack Panel 24 Ports, 19" Rack Mount loaded CRS	per unit	125
iv)	Cat6 Patch cords (1 mtrs) LSZH	per unit	2050
v)	Cat6 Patch cords (2 mtrs) LSZH	per unit	30
vi.)	FacePlate	Per Unit	1000
11	Supply of Single Mode Fiber optic Cable & components		
i)	Outdoor fibre cable - 12 core		
	Armored fiber cable single mode(12 Cores) LSZH with Steel wire	per meter	4240
ii)	Fibre LIUs, 19" rack mount		
	12 port LIU Unloaded CRS	per unit	55
	24 port LIUs Unloaded CRS	per unit	35
iii)	Fibre Connectors		
	SC Connector/pigtail - Single mode (SM)	per unit	750
iv)	Fibre Duplex patch cords		
	Patch Cord single mode Fiber SC - LC Single mode(suitable connector as per active device) (3m) LSZH	per unit	130
v)	SC Duplex Adaptor	Per Unit	250
12	Site certification for minimum 25 yrs. Warranty from OEM of 10 & 11 above	per site	1

13	Media Convertors 10/100/1000 Ethernet(Fiber optic to Copper)	per unit	130
14	Metal Poles for Outdoor Wi-Fi Access Points upto 6mtr high and dia.5.5 inches with lockable iron hut/box size to accommodate the Wi-Fi access point & all other accessories	per unit	10
15	Pole & Mast		
i)	Supply, installation and Erection of Pole with step-up ladder and strut support including civil Foundation and earthing. (per meter rate to be provided)	per unit	8
ii)	Supply, installation and erection of self-supporting GBT/RTT Mast including Foundation work, aviation light, Mast earthing and suitable for wind velocity up to 140Km/hr of IS: 875 (part 3) 1987. And as per designs and drawings approved duly by Structural Engineering Research Centre (SERC), Chennai or any Indian Institute of Technology. Mast shall be capable of carrying a head load of 15 Kg (Antenna plus ODU). (per meter rate to be provided)	per unit	8
16	Annual comprehensive maintenance charges per year in percentage (%) for 2 years after three years of warranty period is over (unit in year)	per year	2
17	Any other item-please specify		
18	Sub Total (Institution Wise)		

Note : The percentage of AMC quoted for the above active and passive components/ items will be applicable for any actual Bill of Material finalized after the site survey and may vary in quantity or change of line item based on actual requirement.

Technical Specifications

A. Active Equipment & Components

1. **Switch Type 1**

S.no.	Technical Specifications
1.	Should be a modular chassis based switch having minimum 6 interface payload slots with extra slots for redundant CPU/Switch fabric and redundant power supply
2.	Should have centralized/distributed switching architecture, each module should be provisioned with adequate hardware/software to support the same.
3.	Dual Redundant Switch Fabric/CPU should support minimum 2 Tbps switch fabric capacity per switch. There should not be any performance degradation in case of any switching/routing engine failure
4.	In the event of failure of one switching/routing engine, forwarding should not stop and failover from one engine to other should be statefull
5.	Switch should support simplify the changes through In-Service OS upgrade mechanism with a minimal disruption of traffic through upgrade process.
6.	Switch should support Netflow or S-flow or J-flow or equivalent. If it is given as services on a module, at least two of those modules shall be quoted to ensure redundancy of the solution.
7.	Minimum 1.5 Bpps forwarding rate should be supported.
8.	Should have hardware based unicast, multicast and broadcast suppression.
9.	Should support multi-layer switching, Layer 2 (MAC), Layer 3 (IP address) and Layer 4 (TCP UDP port) switching and application classification and redirection
10.	Support for 10/100/1000 BASE-T, 1000 BASE-SX, LX, LH ,GBIC/SFP, 10-Gig SR/LR/ZR
11.	Chassis should support upto 144 Nos. of 1/10-Gig non-blocking ports, , support of 24 nos. of 40 GbE ports
12.	Should support a mechanism to detect connectivity issues with both fiber and copper cabling to ensures that a partially failed link is shut down on both sides, to avoid L2/L3 protocol convergence issues
13.	Should have IEEE compliance for 802.1Q VLAN, 802.1p, 802.1d STP, 802.3ad, 802.1w RSTP, 802.1s MSTP, 802.3ad LACP, IEEE 802.1ab Link Layer Discovery Protocol.
14.	Should have 64K MAC addresses
15.	Should have minimum 4K active VLAN support
16.	Should have basic Routing-Static IP routing, RIP v1/v2 and policy based routing
17.	Should have hardware enabled advance IP routing protocols OSPF, OSPFv3, BGPv4, PIM-SSM etc.
18.	Should have VRRP or equivalent for redundancy
19.	Should have IGMP v1, v2, v3
20.	Switch should support Multicast QoS, Multicast ACL, Multicast Netflow/jFLoW/ SFLow,
21.	Should support minimum 8 k multicast entries.
22.	Should support minimum 128k IPv4 and 24K IPv6 routes.

23.	Support extension of VRF without MPLS
24.	Shall have Diff Serv QoS configuration on all ports
25.	Should support minimum 8 queues per port in hardware
26.	Switch should support high availability features like Statefull switchover and Non-Stop forwarding
27.	Should have 1+1 Redundant Power Supply from day one
28.	Should have Hot Swap ability on all modules, Power Supply and Fan Tray
29.	Should have Filters/Access-List on all ports
30.	Should have 802.1x user authentication and accounting
31.	Switch should support minimum 8k Security ACLs
32.	Should support DHCP snooping to allow administrators to ensure consistent mapping of IP to MAC addresses
33.	Switch should support IEEE 802.1AE standard for authenticating and encrypting packets .
34.	Should have TACACS+/RADIUS enabled.
35.	Should have SSHv1 , SSHv2, SNMPv1, SNMPv2, SNMPv3 and NTP support
36.	Switch should be IPv6 Certified/ Ready Logo/TEC certified
37.	For smooth, seamless and easy manageability, operation, interoperability and maintenance, the bidder should offer/quote all the switches(Core Switches, Zonal Switches & Access Switches) of the same make (OEM) and must be managed by the same NMS offered/quoted.
38.	Switch should be minimum EAL3 of common criteria Certified or NDPP or equivalent

2. Switch Type 2

S.No.	Technical Specifications
1.	Hardware Features:
2.	Switch should have 48 x 1G SFP Port and at least 4 x 10G SFP port. one console port and one out of band management ethernet port
3.	Support for 10/100/1000 BASE- T, 1000 BASE-SX,LX,LH/ZX GBIC/SFP and 10-Gig SR/LR/ZR.
4.	Switch shall provide inbuilt redundant hot swappable power supplies for highest resiliency with no single point of failure.
5.	Switch should have 40 Gbps Stacking bandwidth (full duplex)
6.	Performance and capabilities:
7.	Switch should offer minimum 176 Gbps switching capacity.
8.	Switch should support Netflow or J- flow or equivalent.
9.	Switch should support 130 Mpps of forwarding rate.
10.	Should support 2k multicast routes in hardware.
11.	Should have hardware based unicast ,multicast and broadcast suppression.
12.	Should support multi-layer switching,layer2(MAC),Layer 3 (IP address) and Layer4(TCP UDP port) switching and application classification and redirection.
13.	Should support minimum 8 hardware queues per port for classification and scheduling of network traffic.

14.	Layer 2 Features:
15.	Should have IEEE 802.3 ad Link aggregation and port trunking across line cards.
16.	Should support secure VTP or equivalent to reduce administrative burden of configuring VLANs on multiple switches in turn eliminating the configuration errors & troubleshooting in secure manner.
17.	Should Support a mechanism to detect connectivity issues with both fiber and copper cabling. Ensures that a partially failed link is shut down on both sides, to avoid L2/L3 protocol convergence issues.
18.	Should support trace route to ease troubleshooting by identifying the path that a packet takes from source to destination
19.	Should have IEEE compliance for 802.1Q VLAN,801.2p,802.1d STP,802.3ad,802.1w RSTP,802.1Smstp,RPVST+,802.3AD LACP,IEEE 802.1ab,Link Layer Discovery Protocol.
20.	Should have 32K MAC address table
21.	Should have IEEE 802.1Q VLAN tagging with support 1000 active VLANs and 4K VLAN ids
22.	Layer3 Features:
23.	Should have basic Routing – Static IP routing ,RIP v1/v2,RIPng and Policy Based Routing.
24.	Should have hardware enabled advance IP routing protocols OSPF,OSPFv3,BGPv4,PIM-DM,PIM-SSM etc.
25.	Should have VRRP or equivalent for redundancy.
26.	Should have IGMP v1,v2,v3.
27.	Should have IPv4 and IPv6 support in hardware, providing wire- rate forwarding for IPv6 networks. Should support minimum 15 K IPv4 and 5 K IPv6 Routing table entries.
28.	Switch should enable IPv6 from day-1
29.	QoS Features:
30.	Should have Per-port QoS configuration.
31.	Support for IEEE 802.1p QoS policies and Diff Serv QoS on all ports.
32.	Should have IP differentiated service code point (DSCP) and IP precedence.
33.	Should have classification and marking based on full layer 3,4 headers
34.	Should have input and output policing based on layer 3,4 headers.
35.	Should support congestion Avoidance feature.
36.	Should provide local and Remote Port Mirroring.
37.	Management, Easy to Use Deployment and Control Features
38.	Switch should have a console port with RS-232 Interface for configuration and diagnostic purposes.
39.	Switch should be SNMP manageable with support for SNMP Version 1, 2 and 3.
40.	Switch should support TELNET and SSH Version-2 for Command Line Management.
41.	Switch should support 4 groups of embedded RMON (history, statistics, alarm and events).
42.	Support for Unidirectional Link Detection Protocol (UDLD) or equivalent to detect unidirectional links caused by incorrect fiber-optic wiring or port faults and disable on fiberoptic interfaces
43.	Should support trace route eases troubleshooting by identifying the physical path that a packet takes from source to destination.

44.	Switch should be IPv6 Certified/ Ready Logo/TEC certified
45.	Switch should be minimum EAL3 of common criteria Certified or NDPP or equivalent

3. Access Switch (PoE & non PoE)

S.No.	Technical Specification
1.	Switch Architecture and Performance
2.	Switch should have 24 x 10/100/1000 Base-T auto-sensing ports complying to IEEE 802.3, IEEE 802.3u, and 802.3ab standard, supporting half duplex mode, full duplex mode and auto negotiation on each port with at least 2 x 1G/10G uplink with SFP+ support
3.	Switch should have 40 Gbps Stacking bandwidth (full duplex) and stackable upto minimum 8 units in a single stack
4.	Switch should support link aggregation across multiple switches in a stack
5.	Switch should have non-blocking wire-speed architecture
6.	Switch should support IPv4 and IPv6 from day-1
7.	Switch should have non-blocking switching fabric of minimum 128 Gbps or more and should have forwarding rate of minimum 95 Mpps.
8.	Switch should support power supply redundancy
9.	Layer 2 Features
10.	IEEE 802.1Q VLAN tagging with support 1k active VLANs and 4K VLAN ids
11.	Should support for minimum 16k MAC addresses
12.	Should support Spanning Tree Protocol as per IEEE 802.1d, Multiple Spanning-Tree Protocol as per IEEE 802.1s, Rapid Spanning-Tree Protocol as per IEEE 802.1w
13.	Switch should support IGMP v1/v2/v3 as well as IGMP v1/v2/v3 snooping.
14.	Quality of Services (QoS) Features
15.	Switch should support classification and scheduling as per IEEE 802.1 P on all ports.
16.	Should support inter-vlan routing and OSPF.
17.	Switch should support DiffServ as per RFC 2474/RFC 2475.
18.	Switch should support 8 hardware queues per port.
19.	Security Features
20.	Switch should support MAC address based filters / access control lists (ACLs) on all switch ports.
21.	Switch should support Port as well as VLAN based Filters / ACLs.
22.	Switch should support RADIUS and TACACS+ for access restriction and authentication.
23.	Secure Shell (SSH) Protocol, HTTP and DoS protection
24.	Should support DHCP snooping, DHCP Option 82, Dynamic ARP Inspection (DAI)
25.	Management, Easy to Use Deployment and Control Features
26.	Switch should have a console port for configuration and diagnostic purposes.
27.	Switch should be SNMP manageable with support for SNMP Version 1, 2 and 3.
28.	Switch should support TELNET and SSH Version-2 for Command Line Management.

29.	Switch should support 4 groups of embedded RMON (history, statistics, alarm and events).
30.	Support for Unidirectional Link Detection Protocol (UDLD) to detect unidirectional links caused by incorrect fiber-optic wiring or port faults and disable on fiberoptic interfaces
31.	Should support trace route to ease troubleshooting by identifying the path that a packet takes from source to destination
32.	Standards
33.	Should be RoHS Compliant.
34.	Should support IEEE 802.1x support.
35.	Should support IEEE 802.3x full duplex on 10BASE-T and 100BASE-TX ports.
36.	Should support IEEE 802.3u 10 Base-T/100 Base Tx /1000 Base Tx
37.	Switch should be IPv6 Certified/ Ready Logo/TEC certified
38.	Switch should be minimum EAL3 of common criteria Certified or NDPP or equivalent

4. Network Management System (NMS)

S.No.	Technical Specifications
1.	The NMS should support management of Network devices like switches, wi-fi controllers and other SNMP based devices
2.	The NMS should support an open database schema
3.	The NMS should support monitoring, configuration and administration of Routers & Switches
4.	The NMS should support guided workflows based on best practices with built-in configuration templates
5.	The NMS should support the capability to view the network topology
6.	The NMS should support Layer 2 Services
7.	The NMS should support Fault Management
8.	The NMS should support integration with third-party management platform such as NetView, HP OPenView etc
9.	The NMS should support Flexible web-based portal framework
10.	The NMS should support creation of user-defined views
11.	The NMS should support multiple protocols such as https, SSL, SCP, SSH, FTP, TFTP, Telnet and SNMP (v1, v2c and v3).
12.	Inventory Management
13.	The NMS should automatically discover IP devices on the network
14.	The NMS should detect SNMP compliant network devices on the network and manage them.
15.	The NMS should support equipment details - chassis, module, interface
16.	The NMS should support a single menu for discovery status, device status, user tracking, and inventory dashboards
17.	Monitoring and troubleshooting
18.	The NMS should support Troubleshooting assistant with guided workflows
19.	The NMS should support Embedded troubleshooting workflow for quick problem isolation and remediation
20.	The NMS should support centralized fault and event browser (consolidated, syslog, traps, and events and alarms)
21.	The NMS should support dashboard to allow for real-time performance and event monitoring

22.	Configuration management
23.	The NMS should support Configuration backup of Routers, Switches & other network devices
24.	The NMS should support User roles and privileges
25.	The NMS should support change management required to maintain and update network devices
26.	
27.	The NMS should support setting up auto configuration of switch ports
28.	The NMS should support configuration of location settings of switch ports to aid the provisioning and tracking of Media endpoints
29.	The NMS should support device Profiling to create triggers and dynamically configure the switch ports based on the device classification
30.	The NMS should support rule-based device classification engine for Device Profiling
31.	The NMS should support Extensible configuration library; new updates and configurations can be added
32.	The NMS should support creation of a Baseline template for configuration of devices
33.	The NMS should support generation of a non-compliance configuration report against the Baseline template
34.	Reporting
35.	The NMS should support flexible reporting for inventory
36.	The NMS should support flexible reporting for switch port usage
37.	The NMS should support Audit Trail reports
38.	The NMS should support compilation of a report on all Audit Trail changes that occurred in the network during a specific time period
39.	The NMS should support Change Audit report
40.	The NMS should support Syslog report
41.	Installation
42.	The NMS should support an Unattended install
43.	The entire hardware & software with all accessories required for functioning of NMS should be supplied by the vendor.

5 (i). Wireless LAN Controller/ Switch (WLC)-Type1

S.No	Technical specifications
1.	WLC must be compliant with IEEE CAPWAP or equivalent for controller-based Wireless LANs(WLANs)
2.	WLC should be dedicated appliance with support for upto 100 Access points. Should be a standalone appliance in High Availability mode.
3.	Should support multiple redundancy models like 1+1 and N+1.
4.	Should support an ability to dynamically adjust channel and power settings based on the RF environment.
5.	Radio coverage algorithm must allow adjacent WAPs to operate on different channels, in order to maximize available bandwidth and avoid interference
6.	Should support interference detection and avoidance.
7.	Should support coverage hole detection and correction that can be adjusted on a per Access point basis.
8.	Should support RF Management with 40/80 MHz channels
9.	WLC performance should remain the same if encryption is on or off for wireless SSIDs.
10.	WLC Should support Rogue AP detection, classification and standard WIPS signatures.
11.	Should adhere to the strictest level of security standards, including 802.11i Wi-Fi Protected Access 2 (WPA2), WPA, Wired Equivalent Privacy (WEP), 802.1X with multiple Extensible Authentication Protocol (EAP) types, including Protected EAP (PEAP), EAP with Transport Layer Security (EAP-TLS), EAP with Tunneled TLS (EAP-TTLS).
12.	Should support Access Control Lists (ACLs).
13.	Should support built-in web authentication
14.	Should be able to set a maximum per-user bandwidth limit on a per-SSID basis.
15.	Must support user load balancing across Access Points.
16.	Should provide Mesh capability for Mesh supported AP
17.	Must support client roaming across controllers separated by a layer 3 routed boundary.
18.	Must support AP over-the-air packet capture for export to a tool such as Wireshark/equivalent
19.	Should be able to classify different types of interference within 5 to 30 seconds
20.	Should provide a snapshot of air quality in terms of the performance and impact of interference on the wireless network identifying the problem areas.
21.	Should provide real-time charts showing interferers on a per-radio, per-channel basis.
22.	Should support 802.11e WMM
23.	Support for configuring media streams with different priority to identify video streams for preferential quality-of-service treatment.
24.	To deliver optimal bandwidth usage, reliable multicast must use single session between AP and Wireless Controller.
25.	Should support IPv4 & IPv6 from day one.

26.	Should support Internet Group Management Protocol (IGMP) snooping and access point should transmits multicast packets only if a client associated to the access point is subscribed to the multicast group.
27.	For smooth, seamless and easy manageability, operation, interoperability and maintenance, the bidder should offer/quote WLC & WAPs of the same make (OEM).
28.	Controller should support deep packet inspection for all user traffic across Layer 4-7 network to analyses information about applications usage, network usage for all access points from day one in a central and local switching mode.

5(ii). Wireless LAN Controller/Switch (WLC)-Type2

S.no.	Technical specifications
1.	WLC must be compliant with IEEE CAPWAP or equivalent for controller-based Wireless LANs(WLANs)
2.	WLC should be dedicated appliance with support for upto 250 Access points. Should be a standalone appliance in High Availability mode.
3.	Should support multiple redundancy models like 1+1 and N+1.
4.	Should support an ability to dynamically adjust channel and power settings based on the RF environment.
5.	Radio coverage algorithm must allow adjacent WAPs to operate on different channels, in order to maximize available bandwidth and avoid interference
6.	Should support interference detection and avoidance.
7.	Should support coverage hole detection and correction that can be adjusted on a per WLAN basis.
8.	Should support RF Management with 40/80 MHz channels
9.	WLC performance should remain the same if encryption is on or off for wireless SSIDs.
10	WLC Should support Rogue AP detection, classification and standard WIPS signatures.
11	Should adhere to the strictest level of security standards, including 802.11i Wi-Fi Protected Access 2 (WPA2), WPA, Wired Equivalent Privacy (WEP), 802.1X with multiple Extensible Authentication Protocol (EAP) types, including Protected EAP (PEAP), EAP with Transport Layer Security (EAP-TLS), EAP with Tunneled TLS (EAP-TTLS).
12	Should support Access Control Lists (ACLs).
13	Should support built-in web authentication
14	Should be able to set a maximum per-user bandwidth limit on a per-SSID basis.
15	Must support user load balancing across Access Points.
16	Should provide Mesh capability for Mesh supported AP
17	Must support client roaming across controllers separated by a layer 3 routed boundary.
18	Must support AP over-the-air packet capture for export to a tool such as Wireshark/equivalent
19	Should be able to classify different types of interference within 5 to 30 seconds

20	Should provide a snapshot of air quality in terms of the performance and impact of interference on the wireless network identifying the problem areas.
21	Should provide an Air Quality rating on a per- radio basis to help gauge the impact of interference on the network
22	Should provide real-time charts showing interferers per access point, on a per-radio, per-channel basis.
23	Should support 802.11e WMM
24	Support for configuring media streams with different priority to identify specific video streams for preferential quality-of-service treatment.
25	To deliver optimal bandwidth usage, reliable multicast must use single session between AP and Wireless Controller.
26	Should support IPv4 & IPv6 from day one.
27	Should support Internet Group Management Protocol (IGMP) snooping and access point should transmits multicast packets only if a client associated to the access point is subscribed to the multicast group.
28	For smooth, seamless and easy manageability, operation, interoperability and maintenance, the bidder should offer/quote WLC & WAPs of the same make (OEM).
29	Controller should support deep packet inspection for all user traffic across Layer 4-7 network to analyses information about applications usage, peak network usage times for all access points from day one in a central and local switching mode.

5(iii). Wireless LAN Controller/Switch(WLC)-Type3

S.No	Technical specifications
1.	WLC must be compliant with IEEE CAPWAP or equivalent for controller-based Wireless LANs(WLANs)
2.	WLC should be dedicated appliance with support for upto 500 Access points. Should be a standalone appliance in High Availability mode.
3.	Should support multiple redundancy models like 1+1 and N+1.
4.	Should support an ability to dynamically adjust channel and power settings based on the RF environment.
5.	Radio coverage algorithm must allow adjacent WAPs to operate on different channels, in order to maximize available bandwidth and avoid interference
6.	Should support interference detection and avoidance.
7.	Should support coverage hole detection and correction that can be adjusted on a per WLAN basis.
8.	Should support RF Management with 40/80 MHz channels
9.	WLC performance should remain the same if encryption is on or off for wireless SSIDs.
10.	WLC Should support Rogue AP detection, classification and standard WIPS signatures.

11.	Should adhere to the strictest level of security standards, including 802.11i Wi-Fi Protected Access 2 (WPA2), WPA, Wired Equivalent Privacy (WEP), 802.1X with multiple Extensible Authentication Protocol (EAP) types, including Protected EAP (PEAP), EAP with Transport Layer Security (EAP-TLS), EAP with Tunneled TLS (EAP-TTLS).
12.	Should support Access Control Lists (ACLs).
13.	Should support built-in web authentication
14.	Should be able to set a maximum per-user bandwidth limit on a per-SSID basis.
15.	Must support user load balancing across Access Points.
16.	Should provide Mesh capability for Mesh supported AP
17.	Must support client roaming across controllers separated by a layer 3 routed boundary.
18.	Must support AP over-the-air packet capture for export to a tool such as Wireshark/equivalent
19.	Should be able to classify different types of interference within 5 to 30 seconds
20.	Should provide a snapshot of air quality in terms of the performance and impact of interference on the wireless network identifying the problem areas.
21.	Should provide an Air Quality rating on a per- radio basis to help gauge the impact of interference on the network
22.	Should provide real-time charts showing interferers per access point, on a per-radio, per-channel basis.
23.	Should support 802.11e WMM
24.	Support for configuring media streams with different priority to identify specific video streams for preferential quality-of-service treatment.
25.	To deliver optimal bandwidth usage, reliable multicast must use single session between AP and Wireless Controller.
26.	Should support IPv4 & IPv6 from day one.
27.	Should support Internet Group Management Protocol (IGMP) snooping and access point should transmits multicast packets only if a client associated to the access point is subscribed to the multicast group.
28.	For smooth, seamless and easy manageability, operation, interoperability and maintenance, the bidder should offer/quote WLC & WAPs of the same make (OEM).
29.	Controller should support deep packet inspection for all user traffic across Layer 4-7 network to analyses information about applications usage, peak network usage times for all access points from day one in a central and local switching mode.

6. Wireless Access Points (WAP)

S.No.	Indoor Wireless Access Point
1.	Access Points proposed must include radios for both 2.4 GHz and 5 GHz.
2.	Access point must have minimum two Ethernet port.
3.	Must support minimum 3x3 multiple-input multiple-output (MIMO) with three spatial streams
4.	Must support simultaneous 802.11n on the 2.4 GHz and 802.11ac on the 5 GHz radios.
5.	Must support data rates upto 1.3 Gbps on 5 Ghz radio and 450 Mbps on 2.4 Ghz.
6.	Must support 40/80 MHz wide channels in 5 GHz.
7.	Must support minimum 21 dbm of transmit power for both 2.4 and 5 Ghz radios, (EIRP limited as per WPC regulations)
8.	WAP should have the technology to improve downlink performance to all mobile devices including one-, two-, and three spatial stream devices on 802.11n. The technology should use advanced signal processing techniques and multiple transmit paths to optimize the signal received by 802.11 clients in the downlink direction without requiring feedback and should work with all existing 802.11 clients.
9.	Should support configuring the access point as network connected sensor to access any network location covered by the access point to get real-time Spectrum analysis data.
10.	Must support WAP enforced load-balance between 2.4Ghz and 5 Ghz band.
11.	Must incorporate radio resource management for power, channel, coverage hole detection and performance optimization
12.	Must support Proactive Key Caching and/or other methods for Fast Secure Roaming
13.	Must support Management Frame Protection.
14.	Should support locally-significant or pre-installed certificates on the WAPs using a Private / Public Key Infrastructure (PKI).
15.	Must operate as a sensor for wireless IPS
16.	Must support the ability to serve clients and monitor the RF environment concurrently.
17.	WAP proposed must be able to be both a client-serving WAP and a monitor-WAP for Intrusion Prevention services.
18.	Should support mesh capabilities for temporary connectivity in areas with no Ethernet cabling
19.	Must support minimum 16 WLANs per WAP for SSID deployment flexibility.
20.	Must support telnet and/or SSH login/Console to WAPs directly for troubleshooting flexibility.
21.	Must support Power over Ethernet, local power and power injectors. Should be provided with power adapter.
22.	should support 802.11e and WMM
23.	WiFi Alliance Certification for WMM
24.	Must support Reliable Multicast Video to maintain video quality
25.	Must support QoS and Call Admission Control capabilities.
26.	Must support IPv4 and IPv6 from day One
27.	Should operate & function seamlessly with the above mentioned WLCs

	Outdoor Wireless Access Point
1.	Access Points proposed must include radios for both 2.4 GHz and 5 GHz.
2.	Access point must have minimum one Ethernet port.
3.	Must support minimum 2 x 2 multiple-input multiple-output (MIMO) with three spatial streams
4.	Must support simultaneous 802.11n on the 2.4 GHz and 802.11ac on the 5 GHz radios.
5.	Must support data rates of 867 Mbps on 5GHz radio and 300 Mbps for 2.4 GHz.
6.	Must support 40/80 MHz wide channels in 5 GHz.
7.	Must support minimum 21 dbm of transmit power for both 2.4 and 5 Ghz radios, (EIRP limited as per WPC regulations)
8.	WAP should have the technology to improve downlink performance to all mobile devices including one-, two-, and three spatial stream devices on 802.11n. The technology should use advanced signal processing techniques and multiple transmit paths to optimize the signal received by 802.11 clients in the downlink direction without requiring feedback and should work with all existing 802.11 clients.
9.	Should support configuring the access point as network connected sensor to access any network location covered by the access point to get real-time Spectrum analysis data.
10.	Must support WAP enforced load-balance between 2.4Ghz and 5 Ghz band.
11.	Must incorporate radio resource management for power, channel, coverage hole detection and performance optimization
12.	Must support Proactive Key Caching and/or other methods for Fast Secure roaming
13.	Must support Management Frame Protection.
14.	Should support locally-significant or pre-installed certificates on the WAPs using a Private / Public Key Infrastructure (PKI).
15.	Must operate as a sensor for wireless IPS
16.	Must support the ability to serve clients and monitor the RF environment concurrently.
17.	WAP proposed must be able to be both a client-serving WAP and a monitor- WAP for Intrusion Prevention services.
18.	Should support mesh capabilities for temporary connectivity in areas with no Ethernet cabling.
19.	Mesh support should support QoS for voice over wireless.
20.	Must support minimum 16 WLANs per WAP for SSID deployment flexibility.
21.	Must support telnet and/or SSH login/Console to WAPs directly for troubleshooting flexibility.
22.	Must support Power over Ethernet / local power and power injectors. Should be provided with power adapter.
23.	should support 802.11e and WMM
24.	WiFi Alliance Certification for WMM and WMM power save
25.	Must support Reliable Multicast Video to maintain video quality
26.	Must support QoS and Call Admission Control capabilities.
27.	Must support IPv4 and IPv6 from day One
28.	Should operate & function seamlessly with the above mentioned WLCs
29.	Must support Power over Ethernet,

30.	The Access point shall be IP66/IP67 rated for dust and water Ingress protection. Third party casing will not be accepted.
31.	Should support operating temperature -10 to 60 degree Celsius.
32.	Should support wind survivability upto 160 kmph.

7. Firewall

S. No	Technical Specifications
1.	Firewall should appliance based 19" Rack Mountable
2.	Firewall should also support the standard Layer 3 mode of configuration with Interface IP's. It should be possible to protect the firewall policies from being compromised.
3.	Firewall must provide stateful inspection engine support more than 150 protocols including all common protocols of the TCP/IP stack
4.	Firewall must provide NAT functionality, including dynamic and static NAT translations
5.	Firewall should be able to filter traffic even if the packets are fragmented.
6.	It should support the VOIP Applications Security by supporting to filter SIP, H.323 & MGCP flows.
7.	It should be able to block Instant Messaging like Yahoo, MSN, ICQ, Skype (SSL and HTTP tunneled)
8.	It should enable blocking of Peer-Peer applications, like Kazaa, Gnutella, BitTorrent, IRC (over HTTP)
9.	Firewall should support authentication protocols like LDAP, RADIUS and have support for firewall passwords, smart cards, & token-based products like SecurID, LDAP-stored passwords, RADIUS or TACACS+ authentication servers, and X.509 digital certificates.
10.	Firewall should support database related filtering and should have support for leading databases such as Oracle, MS-SQL, and Oracle SQL-Net.
11.	Firewall should provide Web protections designed specifically for Web-based attacks and compliment the network and application level protections. Each protection can be enabled, disabled, or set in passive/monitor mode.
12.	Firewall appliance must be supplied with at least 4 X 10/100/1000Mbps Ethernet ports on Copper and support atleast 2 Gigabit Ethernet ports on Fiber optic.
13.	Firewall appliance should support future extensibility with an option to expand with Copper or Fiber interface
14.	Firewall should support VLAN tagging (IEEE 802.1q) supporting up to 250 VLAN.
15.	Firewall appliance should allow 1 Million Concurrent connections with 50% scalability in the same chassis
16.	Firewall appliance should support 200,000 new sessions/second
17.	Should support firewall throughput of minimum 8 Gbps
18.	Firewall appliance should support Active-Active configuration
19.	Should be IPv4 & IPv6 ready from day one
20.	The product should be EAL certified of common criteria or NDPP or equivalent

9. Intrusion Prevention System (IPS)

S. No.	Technical specifications
1.	IPS should be dedicated appliance based with inspected Throughput should be minimum of 10 Gbps. IPS should provide scalability of atleast 50% of the throughput asked for. The IPS throughput specified should not decrease in case of DDOS scenario.
2.	IPS should support sessions with security state of upto 1000000
3.	Minimum Connections Per Second Should be 50,000
4.	Port Quantity/Type should support combination of copper/SFP providing gigabit connectivity
5.	Number of Ports should be minimum 4 X 1Gigabit Ethernet(copper and 2x 10 G SFP.
6.	Should have dual power supplies
7.	Should support active-active or active passive stateful redundancy
8.	IPS should have + attack Filters
9.	IPS categories/ signatures should atleast contain: Worm , Phishing , Spyware ,Virus , Suspicious , DoS/DDoS ,Trojan , Reconnaissance , P2P, Blended Threat ,VoIP , Backdoor , Zero Day Initiative
10.	IPS Management Interfaces should be 10/100/1000 Mbps Ethernet.
11.	The IPS hardware architecture should be based on FPGA/ASIC switch architecture with parallel processing or based on equivalent technology/architecture
12.	The IPS appliance should not have any high failure rate components like hard disks
13.	The IPS appliance should have both hardware bypass & software bypass
14.	It should support active/passive, active/active, Symmetric & Asymmetric HA without any 3rd party load balancers
15.	While in HA, all the segments/ports should be available for inline protection & all synchronization should be done over the out of the band management port, not sacrificing the inline ports
16.	The IPS vendor should have invested in zero day vulnerability research & actively contributing towards enhancing the IT Security arena
17.	It should be possible to define exceptions per signature
18.	It should be possible to define policies per time schedule, direction, VLAN ID, CIDR & segment/port
19.	It should provide reporting of all security incidence passing through it.
20.	IPS should be IPv4 and IPv6 enabled from day one
21.	The product should be EAL certified of common criteria or NDPP or equivalent

9.Unified threat management (UTM)

S.No.	Specification Required
	Interfaces, Power Supply and Storage
1	Minimum 6 nos. of 10/100/1000 interfaces with a support to upgrade 6x1GE SFP or 4 x1GE SFP
2	Equipment must have redundant power supply (Two number of power supply)
3	The product should be EAL certified of common criteria or NDPP or equivalent
	General Feature
1	Appliance should be quoted with round the clock support & License for IPS, VPN, Gateway Antivirus/spyware, Web content and application filtering with 24 X 7 Technical support. License period will be counted after activation.
2	Equipment should support 2,00,000 or more number of new connection per second
3	Equipment should support 6 million or more number of concurrent connection /session
4	Equipment should support 8 Gbps or more Firewall throughput
5	The proposed equipment should have unrestricted user license.
6	Equipment must support user based policy configuration for security & internet management.
7	Equipment should support 1024 VLAN
8	The Firewall should be Hardware based
9	The proposed solution must support 3 Gbps throughput
	Administration, Authentication & General Configuration
1	Administrative control via secured communication over HTTPS, SSH and from Console.
2	Equipment must support user/ip/mac binding functionality to map username with IP address & MAC address
	High Availability
1	The proposed appliance should send notification to admin on change of appliance status in High Availability.
2	The proposed solution should support Link, device & Session failure
3	The proposed solution should support automatic & manual synchronization
	Security Features
1	The proposed equipment should be ICSA OR EAL4 certified firewall.
2	The proposed solution must support policies for user and device identity
3	The proposed solution should support user defined multi zone security architecture.
4	The proposed equipment should support OSPF, BGP, RIPv1 and RIPv2 dynamic routing along with Static routing
5	Equipment should has the capability to provide MAC Address (Physical Address) based firewall rule to provide OSI Layer 2 to Layer 7 security
6	Equipment should facilitate to apply unified threat policy like AV/AS, IPS,Content filtering, Bandwidth policy & policy based routing decision on firewall rule for ease of use, also

	unified threat controls must be applied on inter zone traffic.
7	Equipment must support Failover -Load Balancing.
8	Equipment should support Fully Qualified Domain Name (FQDN) based host and host group.
	VPN
1	Equipment should have inbuilt support for DES, 3DES, AES and Pre-shared keys & Digital certificate based authentication
2	Equipment should have inbuilt support for IPsec VPNs, L2TP & PPTP VPN connection and it should also support threat free IPsec / L2TP / PPTP tunnel
3	The proposed solution should provide 4 Gbps or more IPsec VPN throughput or more
4	Equipment should support external certificate authorities and export facility of Client-to-site configuration for hassle free VPN configuration in remote Laptop/Desktop. It should also support commonly available IPsec VPN clients
5	Equipment should support provide SSL-VPN solution with Web Access (Clientless), Full Tunnel and Split Tunnel control. Solution should provide per user / group SSL-VPN access (Must be free license for at least 100 users)
	Logging and Reporting
1	Equipment should have an appliance reporting with minimum 200 GB storage or external reporting system based on user (not on IP basis). If reporting system is external, hardware needs to be quoted separately
2	Equipment must have the real-time and historical graphical monitoring system and report can be viewed in CSV/ HTML / PDF format.
3	Equipment must have the facility of email notification of reports, viruses and attacks
4	Equipment must have the facility of logging of Antivirus, Anti-spam, content filtering, Traffic discovery, IPS, Firewall activity
5	Equipment should generate application wise, visited URLs wise and User wise real time traffic reports
6	Equipment should provide detailed reports for all files uploaded via HTTP or HTTPS protocol. The report should include username / IP address / URL / File name / Date and Time.
7	Equipment should provide data transfer reports on the base of application, username, Ip address.
8	Equipment should provide connection wise reports for user, source IP, destination IP, source port, destination port or protocol.
9	The proposed solution should support Auditing facility to track all activity carried out Security appliance.
10	The proposed solution should be able to provide detailed reports about all mails passing through the firewall.
11	The proposed solution should able to generate reports based on username, IP address, URL, groups, categories & category type for web/internet access.

12	The proposed solution should support search criteria in reports to find the relevant data for web / internet access..
13	The proposed solution should provide reports for all blocked attempts done by users / IP address.
	Gateway Anti-Virus
1	The proposed solution should have an integrated Anti-Virus solution with 1.5 Gbps or more throughput
2	The proposed Integrated Anti-Virus/Ant-Spyware should have at least one Certification as part of a UTM viz. ICSA or Webcast Checkmark
3	The proposed solution must work as SMTP proxy not as MTA or relay server.
4	The proposed solution should support scanning for SMTP, SMTPs, POP3, POP3s, IMAP, IMAPs, FTP, HTTP, HTTPS, FTP, FTPs, HTTP, HTTPs protocols.
5	The basic virus signature database of proposed solution should comprise complete wild-list signatures and variants as well as malware like Phishing, spyware.
7	The proposed solution should update the signature database at a frequency of less than two hour & it should also support manual update.
8	The proposed solution should scan http/https traffic based on username, source/destination IP address or URL based regular expression.
9	The proposed solution should provide historical reports based on username, IP address, Sender, Recipient & Virus Names.
	Web content and Application filtering
1	The proposed solution should be integrated solution with inbuilt / cloud based URL database.
2	The proposed solution must work as Standalone HTTP proxy.
3	The proposed solution must have more than 75 web categories
4	The proposed solution must have following features inbuilt
	a. Should be able to block HTTPS based URLs with the help of Certificates.
	b. Should able to block URL based on regular expression
	c. Should support exclusion list based on regular expression
	d. Must have support to block any HTTP Upload traffic.
	e. Should able to block different categories / sites on based on username and category
	f. Should able to identify & block requests coming from behind proxy server on the base of username & IP address.
	g. Should able to identify & block URL translation request.
5	Should able to block known Chat application like Yahoo, MSN, AOL, Google, Rediff, etc.
6	Should support blocking of File transfer on known Chat application and FTP protocol.
7	The proposed solution must block HTTP or HTTPS based anonymous proxy request available on the internet.
8	The proposed solution must be capable of identifying hidden applications running over standard ports.

9	The proposed solution should provide option to customize Access denied message for each category.
10	The proposed solution should be able to identify traffic based on category like Productive, Neutral, unhealthy, non-working websites etc. as specified by admin.
11	The proposed solution should support creation of cyclic policy on Daily/Weekly/Monthly/Yearly basis for internet access on individual users/group of users.
12	The proposed solution should support creation of internet access time policy for individual users or on group basis.
13	The proposed solution should have integrated bandwidth management.
	IPS
1	The proposed solution should have signature based and protocol anomaly based Intrusion prevention system.
2	The proposed integrated IPS should provide 2 Gbps or more throughput
3	The proposed solution should have 7000+ signature database and should able to inspect SSL base traffic
4	The proposed solution must support creation of custom IPS signature.
5	The proposed solution must support creation of multiple IPS policy for different zone instead of blanket policy at interface level.
6	The proposed solution should give username along with IP in IPS alerts and reports.
7	IPS solution should have capability to protect against Denial of Service (DOS) and DDOS attacks.
8	The proposed equipment must be able to block unwanted traffic of P2P software such as Bittorrent, TOR etc along with blocking IM traffic if required
9	The proposed solution should generate historical reports based on top alerts, top attackers, severity wise, top victims, protocol wise.

10 . {(i) & ii)} Server

S. No.	Feature	Specifications
1	Processor type	2X Intel Xeon Quad Core Processor 2.4 Ghz, 10 MB Cahce, 1066 MHz Front Side Bus or better
2	Systems Bus	1066 MHz Front Side Bus or better
3	Standard Memory	32 GB Standard Memory with support of feature like ECC, Sparebank/mirroring
4	Maximum Memory	320GB or better
5	Internal Hard Disk Drive	2 X 1 TB or higher 10K or better RPM HDD Drive
6	Hard Disk Controller	RAID Controller with 256 MB cache (RAID 0/1/5/6)
7	Internal Drive Bays	8 small form factor (SFF) hot plug drive bays to support Serial-attached SCSI (SAS) and Serial ATA (SATA) Drives
8	Optical Drive	IDE DVD ROM/CDRW Combo (Internal / External)
9	Chassis Type	Maximum 2U 19'' Rack Mount
10	Chipset	Latest Intel chipset with latest features
11	Fiber Channel HBA	Dual Port Fibre Channel HBA
12	Network Interface Card	Atleast Two embedded gigabit Network Adapters with TCP/IP Offload Engine
13	External I/O ports	Serial -1,VGA - 1;Network RJ-45 -2; Remote management port - 1; USB 3.0 Port –atleast 4
14	Expansion Slots	I/O 2 X PCI Express or better
15	Power Supply	Redundant & Hot Swappable
16	Compliance Industry Standard	Should be complaint to industry standards like PLUS, Energy star etc.
17	Support	Physical address Extension (PAE) Support; Microsoft Logo Certifications; USB 3.0 Support
18	Compatible Operating Systems	Microsoft Windows Server; Red Hat Enterprise Linux, SUSE Linux Enterprise Server, Vmware Virtulization Software

11. Uninterrupted Power Supply (UPS)

{ (i) & (ii) } UPS 10 & 5KVA

S. No.	Technical specifications	
1	Technology	
	Microprocessor / DSP controlled True On-line using IGBT as switching devices. UPS must be designed for output power factor of 0.9 or better	
2	User Interface	
	LED / LCD display for: UPS on, Line on, Battery operation, Inverter overload	
	TCP/IP based alarm and reporting	
3	Power Rating	
	10KVA &/or 5KVA	
4	Electrical Input	
	Rated Voltage:	Single Phase 230 VAC
	Voltage Range:	180-280V
	Frequency Range:	46Hz~54Hz
	Power Factor	>=0.85
	Efficiency Overall:	>85%
5	Electrical Output	
	Voltage	230VAC , 230 selectable
	Frequency	50Hz +/- 0.2Hz
	Crest Factor	3:1
	Voltage Distributions:	<=3% total harmonic with 100% linear load
	Overload Capacity:	105% for 10 minutes 125% for 1 minute.
	Overall Efficiency (AC to AC) - Online (Double Conversion)	> 90% (On Full Load)
6	Protections: a) Input Over / Under Voltage, b) Phase Fail, c) Overload at the Output d) Output AC Over/Under Voltage, e) Battery Short Circuit	
7	Alarm: a) Mains Fail, b) Low Battery, c) Overload	
8	UPS should have option for manual maintenance bypass. Transfer of load to maintenance bypass should be without disruption of the connected load	
9	Ethernet Port should be provided as standard in the UPS. Optionally, there should be provision for USB port also in the UPS	
10	It should be a standard feature to perform Remote Emergency Power OFF) / (Remote ON - OFF)	
11	Battery	
	Type: Sealed lead acid battery, maintenance free with steel rack for battery housing.	
	Backup Time: One Hour	
	AMBIENT PARAMETERS	

Operating Temperature	0 to 40 degree C
Humidity	20 to 90%
Audible Noise	Less than 60 db
Dimension & Weight	Light weight Smaller
Quality Standard	ISO Certification 9001 & 14001, Safety – CE, Emission – EN-62040, EN-61000

11. (iii) UPS 1KVA

S. No.	Description
1.	Type: Single-phase UPS systems in double-conversion technology compatible batteries, USB/RS232 interface. Power Factor 0.7 Topology Double conversion On-Line Type Rack/Tower
2.	Power Rating :1000 VA
3.	Input : Rated Voltage 230 V (180 – 280 V) Frequency : 50/60 Hz \pm 5 % Power Factor : > 0.9 with linear load
4.	Output: Voltage : 230 V \pm 1 % (220/230/240 V adjustable) Output Frequency : 50Hz \pm 0.1% Crest Factor Should be 3:1 Power Factor : 0.8 or better
5.	Battery: Sealed maintenance free battery for backup duration of 30 minutes. Battery & UPS to be housed in a cubicle with suitable louvers.
6.	Overload Conditions: Overload Capacity : 105% overload continuous Overload Efficiency : 80% or better
7.	Protection against : Short Circuit, Overloading, Low battery, Input Over/Under voltage, Over Temperature
8.	System Indications: LED Indicators: Status displays with AC Power on, load group, Overload, on battery and general alarm indicators. Audible Alarms: For UPS alarm conditions such as on battery, low Battery, overload, UPS fault.
8.1	TCP/IP based alarm and reporting
9.	Certifications: Safety IEC/EN 62040-1, Performance IEC/EN 62040-3, EMC IEC/61000-4 or equivalent
10.	Environmental parameters: Operation Temperature 0 - 40 °C Noise Level < 50 dBA Relative Humidity 0 to 90% (Without condensation)
11.	Form Factor:

	19" Rack mountable/ Tower Type Necessary mounting kit to be provisioned along with the UPS
12	Quality Standard ISO Certification 9001 & 14001

12. Point to Point Ethernet Radio for 120 Mbps Aggregate throughput

S. No.	Description
1	Frequency Must operate in Unlicensed band 2.4 / 5.8Ghz as per WPC norms
2	Must support nLOS deployment
3	The supplied hardware should support IPv4 & IPv6
4	Modulation 2x2 MIMO-OFDM, BPSK, QPSK, 16QAM, 64QAM
5	System Should support adaptive modulation
6	System should Channel Bandwidth 5/10/15/20/30 MHz user configurable to provide required throughput
7	Tx Power Upto 27dBm
8	System should Channel Accuracy ± 20 PPM
9	System should be based on Time Division Duplex Technology TDD
10	System should support Asymmetrical Bandwidth (Uplink/DownLink)
11	System should support Spectral Efficiency to support throughput as per tender requirements
12	System should support Automatic channel selection or Dynamic frequency selection
13	System should support Transmit Power Control - within allowable EIRP, Max 27 dBm.
14	System should have Built-in Spectrum Scanner/Spectrum Analyzer Link-oriented Spectrum Analyzer to show the results of both sites
15	System Should have Error Correction Method FEC 1/2,2/3,3/4and 5/6
16	System should support 120 Mbps Aggregate throughput
17	PTP solution support Integrated antenna or External Antenna for link distance up to 15Km
18	System should have LAN Interface 10/100/1000 BaseT interface with Auto negotiation (IEEE802.3)
19	Framing/Coding IEEE802.3/U
20	System should support Ring Protection and support for redundancy
21	Link Latency Upto 8ms

13. Point to Multipoint Ethernet Radio for 200 Mbps Aggregate throughput

1	Frequency Must operate in Unlicensed band 2.4 / 5.8Ghz as per WPC norms
2	The supplied hardware should support IPv4 & IPv6
3	TDD timing of Radios be synchronized to avoid interference between colocated radios at any site

4	Network Interface should support GbE Port to enable transporting more than 100Mbps asymmetric traffic
5	IP Protection: IP 67 or better certified by International Accredited Lab
6	VLAN Support: It should be based on IEEE 802.1Q, 802.1P and QinQ
7	Quality of Service: System should support QoS based on 4 Queue according to 802.1p/Diffserve
8	System should able to deliver upto 200Mbps net aggregate throughput with single sector Base Station Radio.
9	Modulation technology: OFDM – MIMO 2x2 and Diversity
10	It shall be carrier type point to multi point broad band wireless access radio system.
11	System should Channel Bandwidth 5/10/15/20/30 MHz user configurable to provide required throughput
12	Max output power (at antenna port) Base station: - Min. 10 dbm to 21 dBm or higher
13	Built in Spectrum analyzer and radio should have site management and link management facility (software) for initial configuration, installation and maintenance
14	Sector Antenna 60/90/120 degree coverage sector antenna which can be either Integrated or External antenna
15	Radio should cover distance of 15 Kms or better
16	Should support SNMPv3 & Telnet.
17	Operating temperature for ODUs:-30 deg to +60 deg. Celsius
18	Should control CPE for assured bandwidth Management
19	System should support Asymmetrical Bandwidth (Uplink/DownLink)
20	Base station must have mandatory over the air data encryption AES 128 (CCMP) and FIPS 197 Certified.
21	Latency should be lower than 20ms

14. Customer Premises Radio for 25 Mbps Aggregate Throughput

1	System consisting of outdoor and indoor equipment, antenna, cables, system software and all other hardware and software required for operation, monitoring & configuration of the link.
2	It shall be carrier type point to multi point broad band wireless access radio system.
3	Frequency Must operate in Unlicensed band 2.4 / 5.8Ghz as per WPC norms
4	System should Channel Bandwidth 5/10/15/20/30 MHz user configurable to provide required throughput
5	Radio should support Integrated or External Antenna
6	Radio should cover distance of upto 10 Kms or better
7	Modulation technology: OFDM – MIMO 2 x 2 and Diversity
8	Should be controlled by Base station for assured bandwidth management
9	Antenna Alignment tool by way of Audible Buzzer
10	Latency should be lower than 25 ms
11	Throughput: Up to 25 Mbps Aggregated

12	The supplied hardware should support IPv4 & IPv6
13	Should have interface 100 BaseT

B. Passive Components

1. Should meet ISO 11801 cabling standards and local construction and telecommunication regulations.
2. Should provide a user friendly environment with less technical support and lower maintenance cost.
3. The entire UTP cabling system and components should be tested, approved and certified by internationally recognized third parties such as ETL, UL etc.(Provide documentary proof in this regard)
4. Should be ETL/UL certified
5. The OFC cable and components should conform to 10Gigabit Ethernet or higher standards.
6. All latest standards including the Following standards are to be complied with
 - a. ISO/IEC 11801:2002
 - b. EIA/TIA 568B
 - c. EIA/TIA 568B.2-1
 - d. EIA/TIA 568B.3
 - e. EIA/TIA 568-C.2
7. Passive OEM should provide 25 Years Performance warranty as Service Labor cost should be included (OEM Warranty sample copy mentioning labor cost free to be attached with Bid)
8. Passive Solution should be upgradable to intelligent solution through same make without changing existing Information Outlet & Patchcords.
9. The Information Outlet Should have Shutter with Spring loaded mechanism, and also should have feature as IDC V-Shaped Contacts.
10. RJ 45 type telecommunication outlet should be surface or flush mounted and should support Gigabit Ethernet or higher.
11. The Work Area Patch cord and Mounting Cord should have LSZH (Low smoke Zero Halogen) sheath with factory fitted Slim clear anti-snag slip on boots s. The patch cords should be available in different colors for ease of identification.
12. The 4 pair UTP cable shall be of 23 AWG bare solid copper conductors. The cable should have uniform characteristic impedance. Should be LSZH (Low Smoke Zero Halogen) sheath.
13. meet or Exceed EIA/TIA 568B2.1 CAT 6 Specifications. The Cable should be tested up to 500 Mhz or more.
14. The Patch panel shall be available in 24 ports configurations in one Rack Unit for unshielded installation and shall fit into a 19" size. Rear cable management should only occupy the same area as the panel. Should be made of Powdercoated CRS (Cold Rolled Steel) and loaded with Datagate Jacks with Spring Loaded Shutter. Should Comply UL 1863 & CSA C22.2
15. The 19" rack mount, high quality enclosure fibre termination unit LIU should be made of CRS – Cold Rolled Steel And Should accept SC/ST, MTRJ, LCadapters, etc. Should have Wall & Rack accommodation. Rear, Side & Base access for incoming/outgoing Backbone cables.

16. The Singlemode Fibre patch cord should be made of LSZH sheath, Strength Member as Aramid Yarn with Dust caps shall be fitted on each connector., singlemode graded-index fibres with a 9-micron core and a 125 micron cladding (Singlemode) and factory terminated with SC / LC ceramic connectors at each end.
17. 12 Core fibre Outdoor Armored Fibre should be Gelly Filled , Cush Resistance : Should have Steel wires. Should have LSZH outer sheath with Fire Retardant properties.
18. The bidder shall provide a list of their technical support staff, together with their working experience in the relevant field. Should provide the nearest location of their principal's support center. This center shall have permanently stationed support staff that is capable of providing technical support effectively and efficiently.
19. The bidder shall provide a 25 years industry standards compliance warranty, the 25year Performance warranty shall cover product manufacturing defects for all passive Structured Cabling System as well as components. Labor cost should also be part of OEM Performance warranty.
20. All the UTP cables and fibre optic cables must be individually tested by the tenderer after installation of the cables for conformance to the said standards. The UTP nodes should be tested using the pentascanner and the fibre testing should be performed using the OTDR.
21. Bidder should provide Single Passive OEM authorized MAF only.
22. All equipment and materials supplied shall be new, the best of quality and designed to ensure satisfactory operation under varying atmosphere, climatic, humid tropical conditions without distortion and deterioration in any part affecting efficiency and reliability of the systems. The bidder shall provide manufacturer's literature including manufacturer's data on maintenance and operation of all equipment installed. Relevant catalogues of all materials, instruments, equipment, components, etc. supplied shall be included in this Tender.
23. Each equipment, panel and outgoing cable from the patch panels shall be labeled. Proper labeling and numbering shall also be provided on the outlets. All cable labels are to be of clear wrap around self adhesive type & each cable is to be labeled at each end 100mm from termination point. Labeling to be machine typed.
24. The bidder shall plan the cabling system and routing to ensure system integrity and performance, and that it does not present problems of maintenance, access nor conflict with the operation and maintenance of other systems.
25. All necessary penetrations and access between floors is the responsibility of the bidder, to provide same, and to ensure all penetrations and access holes are fully sealed to local Fire Authority rules.
26. The bidder shall provide adequate support for all cabling that is vertically installed, ensuring that the weight of the cables is sufficiently supported.
27. The bidder shall provide complete and detailed documentation covering the installation and maintenance of the building cabling system. Including "as built" drawings showing all main cable runs, cable trays and catenaries, outlets, consolidation points. Complete with outlet numbering.
28. The bidder should use trenchless digging technique for laying fiber under the roads without affecting the existing utilities.
29. The Bidder may use GI Flexible instead of PVC Flexible and ensure the closure of all points in the network racks subject to proper grounding and safety precautions.
30. Materials such as pipe, bricks, sand, stone-chips, cement, paint etc. required for laying the cables and other fixation work will have to be supplied by the Bidder.

31. All the passive networking components(UTP & Fiber optic cable) as per tender specifications should be from same manufacturer and should be quoted with part numbers alongwith datasheets.
32. All the passive networking components(UTP & Optical Fiber) quoted by the bidder should be from one OEM make to ensure easy integration, compatibility, ease of installation, OEM's warranty and for maintenance purpose.
33. For passive components, the purchase order will be placed based on estimates only. But the payments will be made based on actual quantities installed/consumed.

Financial Bid for Submission of Gross Total Value for items as at Annexure- I

To,

The Registrar & CPO
 ERNET India
 5th floor, Block-I, A Wing
 Delhi IT Park, Shastri Park, New Delhi-110053

Tender No. _____ Date of Opening

We _____ hereby certify that we are established firm of manufactures/authorized agents of M/s. _____ With factories at _____ which are fitted with modern equipment and where the production methods, quality control and testing of all materials and parts manufactured or used by us are open to inspection by the representative of ERNET India. We hereby confirm that the Prices are quoted in Indian Rupees and indicated both in figures and words. Price in words will prevail, in the event of any mismatch. Grand Total Value (GTV) of Annexure-I is :

Grand Total Value (GTV) as per Table-4 of annexure-IIIB (In figures)	
(_____) in words	

Note: US\$ prices should be quoted without custom duty

We (bidder) hereby undertake and confirm that:

1. Prices are F.O.R. at End-user site and include Installation, Fixing, Octroi and other such Govt. Levies wherever applicable. Payment will be subject to deduction of TDS and/or WCT.
2. Prices are without Customs Duty.
3. All items are quoted alongwith necessary accessories and softwares.
4. All the equipment and components quoted, have three years comprehensive warranty. The comprehensive warranty includes on- site warranty with parts/spares.
5. The quotation has been submitted for all items strictly as per the specifications and been given compliance in this regard.
6. Price schedule (as per Annexure-IIIB) for item wise detailed break-up is being submitted in a separate sealed cover and will only be opened if above quoted GTV is found to be lowest (L1).
7. All the prices are quoted in the format as above provided by ERNET India failing which the bid will be rejected out rightly. Also any conditional Price Bid will be rejected.
8. There are No deviations in the specifications as asked in the tender.
9. During warranty and AMC services will be provided directly to University/Institute at sites.
10. The support services for all the items will be available for 24 Hrs a day, 7 days a week.
11. It is hereby confirmed that we have understood the terms and conditions of the tender and have thoroughly examined specifications and are thoroughly aware of the nature of goods required

and our offer is to supply goods strictly in accordance with the requirement and terms and conditions of the tender. We agree to abide by the terms and conditions of the tender if the contract is awarded to us.

12. We hereby offer to supply the goods specified in Annexure-IIIB or such portion thereof as you specify in the purchase order at the price quoted and agree to hold this offer open for acceptance for a period of 180 days from the date of opening of bid.
13. Bid security for an amount equal to Rs. 30,00,000./- is enclosed in the form of Bank Draft/Pay Order/EMD Fixed deposit / Bank Guarantee.

(Signature and seal of Manufacturer/Bidder)

Date:

PRICE SCHEDULE FOR THE SUPPLY OF Items as at Annexure-I

To,

The Registrar & CPO
 ERNET India
 5th floor, Block-I, A Wing
 Delhi IT Park, Shastri Park, New Delhi-110053

Tender No. _____ Date of Opening

We _____ hereby certify that we are established firm of manufactures/authorized agents of M/s. _____ which are fitted with modern equipment and where the production methods, quality control and testing of all materials and parts manufactured or used by us are open to inspection by the representative of ERNET India. We hereby offer to supply the following items at the prices and within the period indicated below:

Table 1 : Active Items (Part A as per Annexure 1) to be quoted in USD

S.No.	Item Description as per Annexure-I	Qty	Unit price in US\$ (A)	Total Price in \$ (B) = (3X4)	Conversion Rate (C) (at Notional rate:1\$ = INR 68)	Total Price in INR (D) = (5x6)
1	2	3	4	5	6	7
1	Description 1 to 24					
2						
3	AMC as per Annexure 1 Part A item no. 25 in % for Year 1					
4	AMC as per Annexure 1 Part A item no. 25 in % for Year 2					
5	Any other item-please specify					
	Grand Total (1)					

Table 2 : Active Items (Part A as per Annexure 1) to be quoted in INR

S.No.	Item Description as per Annexure-I	Qty	Unit price in INR (A)	% Portion of Supply subject to VAT in the unit price for evaluation of WCT	% Portion of Service subject to service tax in the unit for evaluation of WCT *	Rate of Sales Tax	Rate of Service Tax	Amount of Sales Tax (B)	Amt of Service Tax (C)	Total Unit price in INR (A+B+C)	Total Price in INR (3x11)
1	2	3	4	5	6	7	8	9	10	11	12
1	Description 1 to 24										
2											
3	AMC as per Annexure 1 Part A item no. 25 in % for Year 1										
4	AMC as per Annexure 1 Part A item no. 25 in % for Year 2										
5	Any other item- please specify										
	Grand Total (2)										

Table 3 : Passive Items (Part B as per Annexure 1) to be quoted in INR

S.No.	Item Description as per Annexure-I	Qty	Unit price in INR (A)	% Portion of Supply subject to VAT in the unit price for evaluation of WCT	% Portion of Service subject to service tax in the unit for evaluation of WCT *	Rate of Sales Tax	Rate of Service Tax	Amount of Sales Tax (B)	Amount of Service Tax (C)	Total Unit price in INR (A+B+C)	Total Price in INR (3x11)
1	2	3	4	5	6	7	8	9	10	11	12
1	Description 1 to 15										
2											
3	AMC as per										

	Annexure 1 Part B item no. 16 in % for Year 1										
4	AMC as per Annexure 1 Part B item no. 16 in % for Year 2										
5	Any other item-please specify										
	Grand Total (3)										

TABLE -4

	Grand Total Value	Grand Total of Col 7 of Table 1+Grand Total of Col 12 of of Table 2+ Grand Total of Col 12 of Table 3)	
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Note: 1. All the items which are to be imported as per the tender requirements need to be quoted in USD. US\$ prices should be quoted without custom duty. All other items which are not to be imported are to be quoted in INR.

2. * % portion of service means part of price quoted which is towards installation, commissioning, servicing etc. which is subject to service tax under service tax laws.

We (bidder) hereby undertake and confirm that:

1. Prices are F.O.R. at End-user site and include Installation, Fixing, Excise Duty, Octroi and other such Govt. Levies wherever applicable except which are specifically assumed to be quoted in the table. Payment will be subject to deduction of TDS and/or WCT.
2. Prices are without Customs Duty.
3. All items are quoted along with necessary accessories and softwares.
4. The respective component of supply / service has been specified in the price bid for evaluation of WCT only.
5. All the equipment and components quoted, have three years comprehensive warranty. The comprehensive warranty includes on- site warranty with parts/spares.
6. The quotation has been submitted for all items strictly as per the specifications and been given compliance in this regard.
7. There are No deviations in the specifications as asked in the tender.

8. During warranty and AMC services will be provided directly to University/Institute at site.
9. The support services for all the items will be available for 24 Hrs a day, 7 days a week.
10. All the prices are quoted in the format as above provided by ERNET India failing which the bid will be rejected out rightly. Also any conditional Price Bid will be rejected.

11. It is hereby confirmed that we have understood the terms and conditions of the tender and have thoroughly examined specifications and are thoroughly aware of the nature of goods required and our offer is to supply goods strictly in accordance with the requirement and terms and conditions of the tender. We agree to abide by the terms and conditions of the tender if the contract is awarded to us.
12. We hereby offer to supply the goods detailed above or such portion thereof as you specify in the purchase order at the price quoted and agree to hold this offer open for acceptance for a period of 180 days from the date of opening of bid.
13. Bid security for an amount equal to Rs. 30,00,000./- is enclosed in the form of Bank Draft/Pay Order/ Bank Guarantee.

(Signature and seal of Manufacturer/Bidder)

Dated _____ 2016

MODEL BANK GUARANTEE FORMAT FOR PERFORMANCE SECURITY

(To be stamped in accordance with stamp Act)

(The non-judicial stamp paper should be in the name of issuing Bank)

B.G. NO. _____
Date of issue _____
Amount (Rs.) _____
Valid upto _____
Claim Amount upto _____

To,

The Registrar & CPO
ERNET India
5th floor, Block-I, A Wing
Delhi IT Park, Shastri Park, New Delhi-110053

Dear Sirs,

In consideration of the ERNET India (hereinafter referred as the '**Owner**', which expression shall unless repugnant to the context or meaning thereof include its successors, administrators and assigns) having awarded to

M/s. _____ (name, constitution and address) (herein referred to as the '**Contractor**', which expression shall unless repugnant to the context of meaning thereof, include its successors, administrator, executors and assigns) a Purchase Order No. _____ dated _____ valued at _____ (hereinafter referred to as Contract) and the Contractor having agreed to provide a Bank Guranatee towards Performance of the entire Contract equivalent to Rs. _____ (amount of BG) (i.e. _____ per cent of the said value of the Contract) to the Owner.

We _____ (name of the Bank) having its Registered Office at _____ and Corporate/Head Office at _____ (hereinafter referred to as the '**Bank**', which expression shall, unless repugnant to the context or meaning thereof, include the successors, administrators, executors and assigns) do hereby guarantee and undertake to pay at any time up to _____ (day/month/year including claim period) an amount not exceeding Rs. _____, within ten (10) calendar days from the date of receipt by us on first written demand by Owner; through hand delivery or registered A.D. Post or by speed post or by courier, stating that "Contractor" has failed to perform its obligations under the Contract. Aforesaid payment will be made without any demur, reservation, contest, recourse or protest and/or without any reference to the Contractor. Any such demand made by the owner the Bank shall be conclusive and binding notwithstanding any difference between the Owner and Contractor or any dispute pending before any court, tribunal or any authority.

The Bank undertakes not to revoke this guarantee during its currency without previous consent of the Owner and further agrees that the guarantee herein contained shall continue to be enforceable till the Owner discharges this guarantee. The owner shall have the fullest liberty, without affecting in any way the liability of the Bank under this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the Contractor, and to exercise the

same at any time in any manner, and either to enforce or to forebear to enforce any covenants, contained or implied, in the Contract between the Owner and the Contractor or any other course of or remedy or security available to the Owner. The Bank shall not be relieved of its obligations under these presents by any exercise by the owner or by any other matters or thing whatsoever which under law would, but for this provision, have the affect of relieving the Bank. The Bank also agrees that the Owner at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee that the Owner may have in relation to the Contractors liabilities.

This Guarantee can be invoked in one or more trenches and in such a case Owner will not be required to submit the original Guarantee along with submission of claim.

Notwithstanding anything mentioned herein above our liability under this guarantee is restricted to Rs. _____ and it shall remain in force up to and including _____ shall be extended from time to time for such period as may be desired by the Contractor on whose behalf this guarantee has been issued.

WITNESS

BANK

Signature _____

Signature _____

Name _____

Name _____
(Bank's Rubber Stamp)

Seal, name & address of the Bank and address of the Branch

Designation with Bank Stamp

Attorney as per Power of Attorney No. _____

Date: _____

Place :

MODEL BANK GUARANTEE FORMAT FOR FURNISHING EMD

(To be stamped in accordance with stamp Act)

(The non-judicial stamp paper should be in the name of issuing Bank)

B.G. NO. _____
Date of issue _____
Amount (Rs.) _____
Valid upto _____
Claim Amount upto _____

To,

ERNET India
5th floor, Block-I, A Wing
Delhi IT Park, Shastri Park, New Delhi-110053

In consideration of the ERNET India, Ministry of Electronics & Information Technology (hereinafter referred as the '**Owner**', which expression shall unless repugnant to the context or meaning thereof include its successors, administrators and assigns) having issued a tender no. _____ dated _____ and M/s. _____ (name, constitution and address) (herein referred to as the '**Bidder**', which expression shall unless repugnant to the context of meaning thereof, include its successors, administrator, executors and assigns) having made a Bid for the above-mentioned tender and the '**Bidder**' have agreed to give Earnest Money Deposit of Rs. _____ to abide with the below mentioned condition of the tender :

- (1) If the '**Bidder**' withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of bid.
- (2) If the '**Bidder**' having been notified of the acceptance of his bid by the Owner during the period of its validity:-
 - a) If the '**Bidder**' fails to furnish the Performance Security for the due performance of the contract.
 - b) Fails or refuses to accept/execute the contract.

We _____ (name of the Bank) having our Registered Office at _____ and Corporate/Head Office at _____ (hereinafter referred to as the '**Bank**', which expression shall, unless repugnant to the context or meaning thereof, include the successors, administrators, executors and assigns) do hereby guarantee and undertake to pay at any time up to _____ (day/month/year including claim period) an amount of Rs. _____; to the Owner, within ten (10) calendar days from the date of receipt by us of your first written demand through hand delivery or registered A.D. Post or

by speed post or by courier, stating that "Bidder" has failed to perform its obligations under the Tender. Aforesaid Payment will be made without any demur, reservation, contest, recourse or protest and/or without any reference to the **Bidder**. Any such demand made by the Owner to the Bank shall be conclusive and binding notwithstanding any difference between the Owner and Bidder or any dispute pending before any court, tribunal or any authority.

The Bank undertakes not to revoke this guarantee during its currency without previous consent of the Owner and further agrees that the guarantee herein contained shall continue to be enforceable till the Owner discharges this guarantee. The owner shall have the fullest liberty, without affecting in any way the liability of the Bank under this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the **Bidder**, and to exercise the same at any time in any manner, and either to enforce or to forebear to enforce any covenants, contained or implied, in the Tender between the Owner and the **Bidder** or any other course of or remedy or security available to the Owner. The Bank shall not be relieved of its obligations under these presents by any exercise by the owner or by any other matters or thing whatsoever which under law would, but for this provision, have the affect of relieving the Bank. The Bank also agrees that the Owner at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the **Bidder** and notwithstanding any security or other guarantee that the Owner may have in relation to the **Bidder's** liabilities.

Notwithstanding anything mentioned herein above our liability under this guarantee is restricted to Rs. _____ and it shall remain in force up to and including _____ shall be extended from time to time for such period as may be desired by the **Bidder** on whose behalf this guarantee has been issued.

WITNESS

BANK

Signature _____

Signature _____

Name _____

Name _____
(Bank's Rubber Stamp)

Seal, name & address of the Bank and address of the Branch

Designation with Bank Stamp

Attorney as per Power of Attorney No. _____

Date: _____

Place :

Preferential Market Access (PMA) AFFIDAVIT

Format for affidavit of self certification regarding domestic value addition in an electronic product, to be provided on Rs. 100/- stamp paper

Date:

I S/o, D/o, W/o

, resident of

do hereby solemnly affirm and declare as under:

That I will agree to abide by the terms and conditions of the policy of Government of India issued via notification no. 8(78)/2010-IPHW dated 10-02-2012, and the subsequent revision to the policy issued via notification no. 33(3)/2013-IPHW dated 23-12-2013.

That the information furnished hereinafter is correct to the best of my knowledge and belief and I undertake to produce relevant records before the procuring authority or any authority so nominated by the Ministry of Electronics and Information Technology, Government of India, for the purpose of assessing the Domestic Value Addition.

That the domestic value addition for all inputs which constitute the said electronic product has been verified by me and I am responsible for the correctness of the claims made therein. That in the event of the domestic value addition of the product mentioned herein is found to be incorrect and not meeting the prescribed value addition norms, based on the assessment of an authority so nominated by the Ministry of Electronics Information Technology, Government of India for the purpose of assessing the domestic value addition, I will be disqualified from any Government tender for a period of 36 months. In addition, I will bear all costs of such an assessment.

That I have complied with all conditions referred to in the notification no., wherein preference to domestically manufactured electronic products in government procurement is provided and that the procuring authority is hereby authorized to forfeit and adjust my EMD and other security amount towards such assessment cost and I undertake to pay the balance, if any, forthwith.

I agree to maintain the following information in the company's record for a period of 8 years and shall make this available for verification to any statutory authorities:

- i. Name and details of the domestic manufacturer (Registered office, manufacturing unit location, nature of legal entity)
- ii. Date on which this certificate is issued
- iii. Electronic product for which the certificate has been produced
- iv. Procuring agency to whom the certificate is furnished
- v. Percentage of domestic value addition claimed
- vi. Name and contact details of the unit of the manufacturer
- vii. Sale price of the product
- viii. Ex-factory price of the product
- ix. Freight, insurance and handling
- x. Total bill of material
- xi. List and total cost value of inputs used for manufacture of the electronic product.
- xii. List and total cost of inputs which are domestically sourced. Please attach certificate from suppliers if the input is not in-house.
- xiii. List and cost of inputs which are imported, directly or indirectly.

For and on behalf of (Name of firm/entity)

Authorized signatory (To be duly authorized by the Board of Directors)

<Insert Name, Designation and Contact No.>

ERNET India hereinafter referred to as "ERNET"

And

-----[bidder (s) participating in this tender] hereinafter referred to as "The Bidder/Contractor"

Preamble

ERNET India to monitor implementation of Wi-Fi enabled campus Area Networks in client universities under this contract through reputed system integrators who will be selected through the tender for Supply, Installation, Commissioning & Integration of network equipment (active / passive) for establishing Wi-Fi enabled Campus Area Network at Clients site.

Section 1- Commitments of ERNET

1. ERNET commits itself to take all measures necessary to prevent corruption and to observe the following principles:-

- a. No employee of ERNET, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
- b. ERNET will during the tender process treat all Bidder(s) with equity and reason. ERNET will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder (s) confidential/additional information through which the Bidder(s) could obtain an advantage in relation to the process or the contract execution.
- c. ERNET will exclude from the process all known prejudiced persons.

2. If ERNET obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act, or it there be a substantive suspicion in this regard, ERNET will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

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

1. The Bidder(s) / Contractor(s) commit himself to take all measures necessary to prevent corruption. The bidder commits himself to observe the following principles during his participation in the tender process and during the contract execution:

- a. The Bidder(s) / contractor(s) will not, directly or through any other persons or firm, offer promise or give to any of ERNET's employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she

is not legally entitled to, in order to obtain in exchange any advantage or during the execution of the contract.

- b. The Bidder(s) / Contractor(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
- c. The Bidder(s) / Contractor(s) will not commit any offence under the relevant IPC/PC Act; further the Bidder(s) / Contractors will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by ERNET as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- d. The Bidder(s)/Contractor(s) of foreign origin shall disclose the name and address of the Agents/representatives in India, if any. Similarly, the bidder(s)/contractor(s) of Indian Nationality shall furnish the name and address of the foreign principals, if any. Further details as mentioned in the "Guidelines on Indian Agents of Foreign Suppliers" shall be disclosed by the Bidder(s) / Contractor(s). Further, as mentioned in the Guidelines all the payments made to the Indian agent/representative have to be in Indian Rupees only. Copy of the "Guidelines on Indian Agents of Foreign Suppliers" as annexed and marked as Annexure.
- e. The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

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

Section 3: Disqualification from tender process and exclusion from future contracts

- If the Bidder(s)/Contractor(s), before award or during execution has committed a transgression through a violation of Section 2, above or in any other form such as to put his reliability or credibility in question, ERNET is entitled to disqualify the Bidder(s)/Contractor(s) from the tender process or take action as per the Government/ERNET India's procedure on banning of the business dealings/bidders/contractors, etc.

Section 4: Compensation for Damages

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

Section 5: Previous Transgression

- a. The Bidder declares that no previous transgressions occurred in the last three years with any other company in any country conforming to the anti corruption approach or with any other public sector enterprise in India that could justify his exclusion from the tender process.
- b. If the bidder makes incorrect statement on this subject, he can be disqualified from the tender process for action can be taken as per the procedure mentioned in "Guidelines on Banning of business dealings".

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

- a. The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact, and to submit it to ERNET before contract signing.
- b. ERNET will enter into agreements with identical conditions as this one with all bidders, contractors and subcontractors.
- c. ERNET will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

Section 7: Criminal charges against violation Bidder(s)/ Contractor(s)/Sub contractor(s)

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

Section 8: Independent External Monitor/Monitors

1. ERNET appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
2. The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the Director General, ERNET.
3. The Bidder(s)/Contractor(s) accepts that the Monitor has the right to access without restriction to all project documentation of ERNET including that provided by the Contractor. The Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/Contractor(s)/Subcontractor(s) with confidentiality.
4. ERNET will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the

contractual relations between ERNET and the Contractor. The parties offer to the Monitor the option to participate in such meetings.

5. As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of ERNET and request the Management to discontinue or take corrective action, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
6. The Monitor will submit a written report to the Director General, ERNET within 8 to 10 weeks from the date of reference or intimation to him by ERNET and, should the occasion arise, submit proposals for correcting problematic situations.
7. Monitor shall be entitle to compensation on the same terms as being extended to / provided to Director level in the ERNET India or as decided by Director General of ERNET India.
8. If the Monitor has reported to the Director General ERNET, a substantiated suspicion of an offence under relevant IPC/PC Act, and the Director General ERNET has not, within the reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.
9. The word 'Monitor' would include both singular and plural

Section 9 - Pact Duration

1. This pact begins when both parties have legally signed it. It expires for the Contractor 10 months after the last payment under the contract or after 10 months from the expiry of Rate Contract (RC) which ever be later and for all other Bidders 12 months from the contract has been awarded.
2. If any claim is made / lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged / determined by Director General of ERNET.

Section 10 - Other provisions

1. This agreement is subject to Indian Law, Place of performance and jurisdiction is the Registered Office of ERNET, i.e. New Delhi.
2. Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
3. If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
4. Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

(For & on behalf of ERNET)

(For & on behalf of Bidder/Contractor) (Office Seal)
(Office Seal)

Place-----

Date-----

Witness 1: (Name & Address) _____

Witness 2: (Name & Address) _____