ERNET India

(An Autonomous Scientific Society under Department of Electronics and Information Technology, GoI)

10th Floor, Jeevan Prakash Building,

25, Kasturba Gandhi Marg,

New Delhi-110001

No. EI-D

Dated: 25.06.2014

Due Date: 10.07.2014 & Time: 3:00 PM Opening of Bids: 10.07.2014 & Time: 3:30 PM

Subject: Supply, Installation and Commissioning of Active and Passive network components for Establishment of Campus Area Network for North Lakhimpur College, Lakhimpur, Assam.

- 1. **ERNET India**, an Autonomous Scientific Society under Department of Electronics and Information Technology, Govt. of India, is a Class `A' Internet Service Provider for the Education and Research community in India.
- 2. ERNET India is a nodal network for integrating education & research institutions in the country. Internet service is one of the services being provided by ERNET India to these institutions. The services are provided through 15 Points of Presence (PoPs) located at the premier education & research institutions in the country. All these PoPs are connected on high-speed backbone with international connectivity. More than 1300 educational and research institutions are connected on the Network through these nodes.
- 3. Sealed limited tenders are invited from the reputed manufacturers (OEMs) or their authorized System Integrators (authorization from OEMs to be submitted) for **Supply**, **Installation and Commissioning of Active and Passive network components for Establishment of Campus Area Network for North Lakhimpur College**, **Lakhimpur**, **Assam**.
- 4. The bidders will submit technical bids along with complete Bill of Materials and 'make and model no' of each item to be used for the solutions offered by them. Also the bidder shall submit a detailed architecture along with network diagrams for their proposed solutions.
- **5.** The detailed bill of quantity and technical specifications of equipment are enclosed in Annexure-I and II respectively.
- 6. To have better understanding of the exact solution requirement bidders may visit the ERNET's user location i.e North Lakhimpur College, Lakhimpur, P.O- Khelmati 787031, North Lakhimpur, Assam before submitting their respective offers / bids.

The following instructions should be carefully noted:

GENERAL CONDITIONS

- 1. The bidder must be a reputed manufacturer (OEM) or his authorized representative/ System Integrator of the type of product offered. The authorization against the tender enquiry from the manufacturers/ OEMs must be submitted along with the bid. The bids received without authorization against the tender enquiry will liable to be rejected.
- **2.** Quotations should be submitted in two separate sealed covers. First cover indicating, "COVER FOR TECHNICAL SPECIFICATION" should consist of only technical specification of the system offered along with literature, pamphlets, etc. including detailed Bill of materials and network diagrams for the proposed solutions. Technical Bid should contain complete technical specifications, make and model of the items, and commercial terms etc. of the system offered. Price column in this cover should be kept blank. Second cover indicating, "COVER FOR PRICE BID" should consist the same details of first cover as well as price details also. Both the covers should first be sealed separately, and then both the covers 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.

3. Contents of Tender

3.1 Tender would have two parts. Part I contain Pre-qualification, EMD and Technical Bids and Part II will have Financial Bids.

Part-I will contain: -

- **3.1.1** The Compliance Statements completed in all respect against all the Sections of the tender as per clause 2 Section-B.
- **3.1.2** Power of Attorney/Authorization on the name of the person signing the bid document with company seal on it. Such authorization can only be given by the person authorized by the company owner or broad for issuing such documents. (documentary proof may be submitted)
- **3.1.3** Tender fee and Earnest Money Deposit (EMD) as mentioned in this tender.
- **3.1.4** Valid Income Tax Clearance Certificate (ITCC).
- **3.1.5** Detailed technical offer.
- **3.1.6** Tender document duly signed and stamped by the bidder.
- 3.1.7 The technical offer should comprise of following:-
- 1. Detailed technical description of the offered solution architecture in accordance with tender requirements.
- 2. Complete network diagram detailing proposed connectivity flow.
- 3. Complete Technical Solution including lay-out, design and architecture of the network.

- 4. Bill of material with exact quantity details and their specific make & model details.
- 5. Data Sheet, Product Brochures, leaflets, manuals etc. of the offered products cross-referenced with the tender specifications and technical solution requirements to proof the bidder's solution compliance. (Generic data sheet of models quoted will not be acceptable)
- 6. Delivery and implementation schedule with exact milestones achieved on per week basis in accordance with tender requirement till the final commissioning and acceptance of the solution and project as a whole.
- 7. Compliance of each term and condition indicating deviation clearly, if any.
- 8. Comprehensive warranty details. (Mention clearly the services included in this). Also information regarding availability of helpdesk support, email address, Toll free contact no. etc. for use of ERNET under this project.
- 9. Un-priced financial bid as per tender format.

 (If the technical bid contains any price information the bid will be summarily rejected).
- 10. List of Deliverables.
- 11. Project Implementation Methodology specific to this project and Operation Management plan details.
- 12. Compliance of the Pre- Qualifying criteria / Eligibility as per the tender along with documentary evidence of the same.
- 3.2 Part-II (Financial Bid) will contain:
- 3.2.1 The prices should be quoted as per the Price Formats given in the Annexure-III.
- 3.2.2 The breakup of the price should include the following:
 - a. One time supply, Installation, Integration & commissioning for complete system against the BoM with 01 comprehensive warranty and next 02 years AMC on per year basis.
 - b. The quoted cost should be inclusive of installation, commissioning, training and any other cost, if required to complete the solution.
 - c. The quoted prices should be inclusive of freight, insurance charges, etc.
- **4.** Bids should be valid for a minimum period of 180 days after the due date.
- **5.** Envelope should bear the inscription.

"Supply, Installation and Commissioning of Active and Passive network components for Establishment of Campus Area Network for North Lakhimpur College, Lakhimpur, Assam."

"Due Date: Time Opening of Bids: Time"

- 6. The Bids must reach the undersigned on or before the due date. Bids received after the due date & time is liable to be rejected. In the event of due date being a closed 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.
- 7. The rates should be quoted in Indian Rupees for delivery at the premises of ERNET's user i.e North Lakhimpur College, Lakhimpur, Assam. All prices shall be fixed and shall not be subject to escalation of any description. The rates must be quoted as per the bill of materials / Price Bid provided in Annexure-III.
- **8.** Govt. Levies like sales tax/ VAT, octroi, WCT etc., if any, shall be paid at actual rates applicable on the date of delivery. Rates should be quoted accordingly giving the basic price, Sales Tax etc., if any.
- 9. It may specifically be mentioned whether the quotation is strictly as per tender specifications/conditions. If not, deviations must be spelt out specifically. <u>In the absence of this, the quotation may be rejected.</u>
- **10.** ERNET India reserves the right to accept or reject any bid or cancel the tender proceedings without assigning any reason whatsoever.
- 11. The bidders should quote the products strictly as per the tendered specifications giving models, make and exact specifications. All the technical literature/ Data sheets for the products offered by the bidder may be enclosed in the bid.
- 12. Incomplete quotations are liable to be rejected.
- 13. Bidder shall sign all pages of quotation and drawings forwarded with the quotation.
- 14. In case of any discrepancy between rates mentioned in figures and words, the latter shall prevail.
- **15.** Bidder should quote for all the items. Any partial bidding may lead to rejection of bid.
- **16.** ERNET India may waive any minor deviations or may seek any clarification, if so desired.
- 17. Any attempt of negotiation directly or indirectly on the part of the tenderer 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 tenderer or to influence by any means the acceptance of a particular tender will render the tender liable to be excluded from consideration.
- **18.** The vendor will have to arrange for all the testing equipment and tools required for installation, testing, maintenance etc.
- **19.** All the offered Wi-Fi equipments should be from single OEM.
- **20.** ERNET will have the right to reject the components / equipment supplied if it does not comply with the specifications at any point of installation / inspection.

- 21. The vendors should give clause-by-clause compliance for the technical specification of the equipments in their technical bids.
- 22. Any equipment quoted by bidder should not be declared as end of life from its OEM and also bidder should arrange an undertaking from OEM side in this regard along with next 5 years support commitment.

23. Comparison and Evaluation of Tenders

- 23.1 The Tenders received and accepted will be evaluated by ERNET to ascertain the technically competent and lowest evaluated Tender in the interest of Project for the complete scope of the tender.
- 23.2 In the process of bids evaluation, ERNET may seek clarifications to any of the bidders on their submitted bid and request them to submit the documents as may be required for evaluation.
- 24. The evaluation of the bids will be done on the basis of ownership of the solution for 5 years.

25. <u>EARNEST MONEY DEPOSIT</u>

- i) Each quotation must be accompanied by Earnest Money Deposit of Rs.50,000/- (Rupees Fifty thousand only) shall be in the form of Demand Draft/Pay Order/Bank Guarantee of any Nationalized Bank in the favour of "ERNET India, New Delhi." Bank Guarantee should be valid minimum for a period of 180 days from the original date of bid submission. **Quotations received without Earnest Money Deposit are liable to be rejected.**
- ii) Earnest Money is liable to be forfeited and bid is liable to be rejected, if the tenderer withdraw or amends, impairs or derogated from the tender in any respect within the period validity of the tender.
- iii) The earnest money of all the unsuccessful tenderers will be returned after placement of order on the selected vendor. No interest will be payable by ERNET India on the Earnest Money Deposit.
- iv) The Earnest Money of successful bidder shall be returned after delivery & installation of equipments.
- v) The bidder should enclosed the Tender fee od Rs. 2000/ in the form of DD in favour of "ERNET India". The tender fee should be enclosed.

26. Performance Guarantee

- 26.1 The bidder, whose bid is accepted, shall submit the performance guarantee of 10% (Ten Percent) of the total project price to ERNET in the form of an irrevocable and unconditional bank guarantee on a nationalized Indian bank, as per **Proforma attached as Annexure-IV** within 15 calendar days of the issue of Letter of Intent (LOI) / letter of acceptance.
- 26.2 The guarantee amount shall be payable to ERNET in Indian Rupees without any condition whatsoever and the guarantee shall be irrevocable.
- 26.3 The performance guarantee shall be **deemed to govern the following guarantees** from the successful bidder, in addition to the other provisions of the guarantee:
- 26.4 The successful and satisfactory operation of the equipment supplied in accordance with the specifications and other relevant documents.

- 26.5 The equipment supplied shall be free from all defects and designs, material and workmanship and upon written notice from ERNET, the successful bidder shall fully remedy free of expenses to ERNET all such defects as developed under the normal use of the said equipment within the period of contract with the bidder.
- 26.6 The performance guarantee is intended to secure the performance of the entire equipment and services by the bidder. However, it is not to be considered as limiting the damages stipulated in any other clause.
- 26.7 The performance guarantee will be returned to the successful bidder at the end of the period of 01 year warranty period or any other liability without interest.

27. <u>INSPECTION</u>

ERNET India or its representative 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 either replace the rejected goods or make all alterations necessary to meet specification required free of cost to ERNET India.

28. WARRANTY / AMC

Warranty shall include free onsite maintenance of the whole equipment supplied including free replacement of parts and free software upgrades. The defects if any shall be attended to on immediate basis but in no case any defect should prolong for more than 6 hours. The Comprehensive Warranty shall be for a minimum period of one year form the date of acceptance of the equipment by ERNET India/ end user. The bidders are also required to quote for Comprehensive maintenance/ AMC including all Hardware's and Software's for 2 years after one year of warranty period. The bids received without quotes for Comprehensive Maintenance would be out rightly rejected. The Grand total including the cost of AMC for 2 years will be taken into account for deciding the L1 bidder.

29. DELIVERY & COMMISSIONING PERIOD

The bidder will ensure Supply, Installation and Commissioning of Active and Passive network components for Establishment of Campus Area Network for North Lakhimpur College, Lakhimpur, Assam within first 3 weeks from the date of placement of purchase order at user location to establish the proposed network as per the scope of work given in this tender. Bidder shall be responsible for submission of acceptance test document and getting it signed by the authorised official of ERNET / end user. The warranty of the equipment should start from the date of acceptance of the network as a whole.

Any delay by the supplier in the performance of delivery, installation and Commissioning of the equipments/ network shall render the supplier liable to any or all the following sanctions-forfeiture of its Earnest Money Deposit/ PBG, imposition of liquidated damage or/ and cancellation of the purchase order for default.

30. LIQUIDATED DAMAGES

If the supplier fails to delivery any or all of the goods or complete the installation/services within the period specified in the purchase order, ERENT India shall without prejudice to its other remedies, deduct as liquidated damage 2 per cent of the value of purchase order.

31. Rates quoted by the Bidder shall be final and no negotiation will be held.

32. PAYMENT TERMS:

Payment shall be made by ERNET India to the successful bidder as per the following schedule. The payment shall be made by cheque to the vendor.

- (i) 90% of the payment shall be made after the successful Supply, Installation, Commissioning and acceptance of complete network by ERNET India / End users and the remaining 10% will be paid after satisfactory completion of warranty period of one year OR 100% payment will be released upon submission of PBG of equivalent to 10% of amount to be valid for a period of 15 months.
- (ii) W.r.t AMC/ maintenance cost of every year, payment shall be made on quarterly basis after satisfactory completion of every quarter in the complete period of contract.

Note: All the payments released from ERNET side will be subject to payments received to ERNET from its user organisation.

33. ELIGIBILITY CRITERIA:

- 33.1 Bidder should be a registered company under company registration act 1956 or registered society under society registration act 1860.
- 33.2 The bidder should be an ISO 27001 certified company/ organization.
- 33.3 The bidder shall have an average annual turnover of above Rs. 1 crores in the last three financial years.
- 33.4 The bidder should have positive net worth in the last three years.
- 33.5 Bidder should have executed 03 similar works of value not less than 7 lakhs (of each order) in last 3 years from the date of release of this tender. (order copies to be provided)
- 33.6 In order to ensure proven-ness of the offered Wi-Fi solution, the offered OEM should have presence in India from last 03 years and also have minimum 5 similar deployments in Education/Research Institute. (order copies from OEM to be provided)
- 33.7 The offered OEM for Wi-Fi equipments should be listed in Gartner/IDC in Leaders quadrant.
- 33.8 The bidder should not have been blacklisted in the past from any Central/State Government organization/undertaking across India. An undertaking in this regard should be submitted by the bidder.

34. SLA Terms and conditions during the period of warranty and AMC.

- 34.1 Maintain an uptime of 99 %. Uptime can be ensured by providing standby equivalent equipment.
- 34.2 Call attending time within 6 hours and resolution in next 6 hours including any hardware reapir or change.
- 34.3 Any faulty hardware will be replaced at the earliest by hardware of equivalent specifications at the earliest. After repairing, the same equipment will be placed in the network. If hardware is beyond repair, it may be replaced with new equipment of same specifications.
- 34.4 The Successful Bidder will provide the toll-free number for registration of complaint.
- 34.5 The Successful Bidder will keep the spares of major equipments of the equivalent specifications. Vendor should submit an undertaking along with list of standby material in technical bid.
- 34.6 Downtime penalty of 1% of maintenance cost of complete network for every 0.1% below 99%.

Yours faithfully,

(B.B.Tiwari) Registrar & CPO

Annexure-I

1. Bill of Quantity

| S. No. | Specification available at Clause No. | Description | Quantity (Nos.) |
|--------|---------------------------------------|---|---------------------------|
| 1 | 2.1 –Annexure - I | Wi-Fi Controller | 01 |
| 2 | 2.2 –Annexure - I | Wireless Access Point with Mounting Kit | 14 |
| 3 | | 24 Port Un-Managed Switch | 02 |
| 4 | | 8 Port Un-Managed Switch | 18 |
| 5 | | 24 Port Patch Panel | 02 |
| 6 | | Cable Manager | 01 |
| 7 | | Cat 6 Patch Chords (3 ft.) | 40 |
| 8 | | Cat 6 Patch Chords (7 ft.) | 08 |
| 9 | | I/O and Face Plate Cat-6 with GI Module Box | 40 |
| 10 | | PVC Channels 25mm | 2200 |
| 12 | | Cat 5e Cable (Mtr.) | 3000 |
| 13 | | Cat 6 Cable (Mtr.) | 2300 |
| 14 | | RJ 45 Connector | 120 |
| 15 | | 6 Core Single Mode Fibre Optic Cable (Mtr.) | 1700 |
| 16 | | Joint Enclosure Box | 50 |
| 17 | | Fibre Patch Cords SC-LC ,SM 3 (Mtr.) | 64 |
| 18 | | Media Convertor | 16 |
| 19 | | 9U Networking Rack | 01 |
| 20 | | 1 st year maintenance support cost (AMC) | 1 |
| 21 | | 2 nd year maintenance support cost (AMC) | 1 |
| 22 | | Any other additional item required to complete the solution | As per the Requirement |

Annexure-II

2. Technical Specifications

2.1 Wi-Fi Controller

| | Description | Compliance (Yes/No) with Page Reference in Datasheet |
|----|---|--|
| | Essential Features: | |
| 1 | WLAN Controller should have minimum 2 nos. of 10/100/1000 Ethernet Ports and one Console port. It should be 1/2U Rack Mountable. | |
| 2 | Proposed Controller should be ready for supporting 50 AP's from day one with scalability for 100 AP support in future without adding any new hardware. Controller should be able to support minimum 500 devices and 100 campus connected AP's or more with support of seamless roaming access over L2/L3 network. | |
| 4 | Controller should support minimum 256 WLAN's | |
| | General Feature | |
| 5 | Controller should provide air-time fairness between these different speed clients – slower clients should not be starved by the faster clients and faster clients should not adversely affected by slower clients. | |
| 6 | Controller should support Spectrum Analysis feature to detect interference from different sources. System Should provide real-time charts showing interference for access point, on a per-radio, per-channel basis. | |
| 7 | Ability to map SSID to VLAN and dynamic VLAN support for same SSID. | |
| 8 | Controller must support 802.11k and 802.11r. | |
| 9 | Access points can discover controllers across Layer-3 network through DHCP or DNS option | |
| | Security & monitoring | |
| 10 | Controller should support following for security & Authentication: | |
| 11 | WIRELESS SECURITY: WEP, WPA-TKIP, WPA2-AES, 802.11i | |
| 12 | AUTHENTICATION: 802.1X, local database External AAA servers: Active Directory, RADIUS, LDAP | |
| 13 | System should provide DOS attacks and Intrusion Detection & Prevention and Control for any Rough Access Points. | |

| The AP should be able to scan for rogue access points and the controller should be able to locate them on a floor map. The controller should be able to send a notification to the administrator when a rogue AP has been detected. 15 | | | |
|---|----|---|--|
| Controller Should support L2 Client Isolation so User cannot access each other's devices. Isolation should have option to apply on AP or SSID's. Controller should be able to create local database of up to 5000 users. IR IPv4 & IPv6 support from Day 1 Controller should support integrated or External AAA server including Microsoft AD and Linux based open source AAA servers. The proposed architecture should be based on controller based Architecture with thick AP deployment. While Encryption / decryption of 802.11 packets should be able to perform at the AP. The Controller should support OS/Device finger printing and device type based policies i.e allow or deny, Bandwidth rate limit, VLAN mapping. When Mesh is enabled the controller should be able to show the mesh topology on floor plans. The controller should be able to raise critical alarms by sending an email. The email client on the controller should support SMTP outbound authentication and TLS encryption. The vendor should specify if all features are available with the basic access controller pricing or if the support of some features require the acquisition of some licenses. The vendor should specify which feature requires which type of licensing including its cost. Controller should have BYOD features and Guest Access management procedure where user may use internet without entering to Enterprise SSID and should be time restricted. QoS features 26 per SSID or dynamic Per user bandwidth Rate Limiting Support advanced multicast features and WMM support to provide best performance on Video applications. 28 Should have Voice Call Admission control Client Management The controller should provide a Guest Login portal in order to authenticate users that are not part of the organization. | 14 | controller should be able to locate them on a floor map. The controller should be able to send a notification to the | |
| 16 access each other's devices. Isolation should have option to apply on AP or SSID's. 17 Controller should be able to create local database of up to 5000 users. 18 IPv4 & IPv6 support from Day 1 Controller should support integrated or External AAA server including Microsoft AD and Linux based open source AAA servers. 19 Servers. 10 The proposed architecture should be based on controller based Architecture with thick AP deployment. While Encryption / decryption of 802.11 packets should be able to perform at the AP. 10 The Controller should support OS/Device finger printing and device type based policies i.e allow or deny, Bandwidth rate limit, VLAN mapping. 21 When Mesh is enabled the controller should be able to show the mesh topology on floor plans. 22 The controller should be able to raise critical alarms by sending an email. The email client on the controller should support SMTP outbound authentication and TLS encryption. 23 SMTP outbound authentication and TLS encryption. 24 The vendor should specify if all features are available with the basic access controller pricing or if the support of some features require the acquisition of some licenses. The vendor should specify which feature requires which type of licensing including its cost. 25 Controller should have BYOD features and Guest Access management procedure where user may use internet without entering to Enterprise SSID and should be time restricted. 26 per SSID or dynamic Per user bandwidth Rate Limiting 27 Support advanced multicast features and WMM support to provide best performance on Video applications. 28 Should have Voice Call Admission control 29 Client Management The controller should provide a Guest Login portal in order to authenticate users that are not part of the organization. | 15 | System must be able to provide L2/L3/L4 Access Control. | |
| 18 IPv4 & IPv6 support from Day 1 Controller should support integrated or External AAA server including Microsoft AD and Linux based open source AAA servers. The proposed architecture should be based on controller based Architecture with thick AP deployment. While Encryption / decryption of 802.11 packets should be able to perform at the AP. The Controller should support OS/Device finger printing and device type based policies i.e allow or deny, Bandwidth rate limit, VLAN mapping. When Mesh is enabled the controller should be able to show the mesh topology on floor plans. The controller should be able to raise critical alarms by sending an email. The email client on the controller should support SMTP outbound authentication and TLS encryption. The vendor should specify if all features are available with the basic access controller pricing or if the support of some features require the acquisition of some licenses. The vendor should specify which feature requires which type of licensing including its cost. Controller should have BYOD features and Guest Access management procedure where user may use internet without entering to Enterprise SSID and should be time restricted. QoS features 26 per SSID or dynamic Per user bandwidth Rate Limiting 27 Support advanced multicast features and WMM support to provide best performance on Video applications. 28 Should have Voice Call Admission control Client Management The controller should provide a Guest Login portal in order to authenticate users that are not part of the organization. | 16 | access each other's devices. Isolation should have option to | |
| Controller should support integrated or External AAA server including Microsoft AD and Linux based open source AAA servers. The proposed architecture should be based on controller based Architecture with thick AP deployment. While Encryption / decryption of 802.11 packets should be able to perform at the AP. The Controller should support OS/Device finger printing and device type based policies i.e allow or deny, Bandwidth rate limit, VLAN mapping. When Mesh is enabled the controller should be able to show the mesh topology on floor plans. The controller should be able to raise critical alarms by sending an email. The email client on the controller should support SMTP outbound authentication and TLS encryption. The vendor should specify if all features are available with the basic access controller pricing or if the support of some features require the acquisition of some licenses. The vendor should specify which feature requires which type of licensing including its cost. Controller should have BYOD features and Guest Access management procedure where user may use internet without entering to Enterprise SSID and should be time restricted. QoS features 26 per SSID or dynamic Per user bandwidth Rate Limiting 27 Support advanced multicast features and WMM support to provide best performance on Video applications. 28 Should have Voice Call Admission control Client Management The controller should provide a Guest Login portal in order to authenticate users that are not part of the organization. | 17 | _ | |
| 19 including Microsoft AD and Linux based open source AAA servers. The proposed architecture should be based on controller based Architecture with thick AP deployment. While Encryption / decryption of 802.11 packets should be able to perform at the AP. The Controller should support OS/Device finger printing and device type based policies i.e allow or deny, Bandwidth rate limit, VLAN mapping. When Mesh is enabled the controller should be able to show the mesh topology on floor plans. The controller should be able to raise critical alarms by sending an email. The email client on the controller should support SMTP outbound authentication and TLS encryption. The vendor should specify if all features are available with the basic access controller pricing or if the support of some features require the acquisition of some licenses. The vendor should specify which feature requires which type of licensing including its cost. Controller should have BYOD features and Guest Access management procedure where user may use internet without entering to Enterprise SSID and should be time restricted. QoS features 26 per SSID or dynamic Per user bandwidth Rate Limiting Support advanced multicast features and WMM support to provide best performance on Video applications. Should have Voice Call Admission control Client Management The controller should provide a Guest Login portal in order to authenticate users that are not part of the organization. | 18 | IPv4 & IPv6 support from Day 1 | |
| 20 Architecture with thick AP deployment. While Encryption / decryption of 802.11 packets should be able to perform at the AP. The Controller should support OS/Device finger printing and device type based policies i.e allow or deny, Bandwidth rate limit, VLAN mapping. 22 When Mesh is enabled the controller should be able to show the mesh topology on floor plans. The controller should be able to raise critical alarms by sending an email. The email client on the controller should support SMTP outbound authentication and TLS encryption. The vendor should specify if all features are available with the basic access controller pricing or if the support of some features require the acquisition of some licenses. The vendor should specify which feature requires which type of licensing including its cost. 25 Controller should have BYOD features and Guest Access management procedure where user may use internet without entering to Enterprise SSID and should be time restricted. QoS features 26 per SSID or dynamic Per user bandwidth Rate Limiting 27 Support advanced multicast features and WMM support to provide best performance on Video applications. 28 Should have Voice Call Admission control Client Management The controller should provide a Guest Login portal in order to authenticate users that are not part of the organization. | 19 | including Microsoft AD and Linux based open source AAA | |
| device type based policies i.e allow or deny, Bandwidth rate limit, VLAN mapping. When Mesh is enabled the controller should be able to show the mesh topology on floor plans. The controller should be able to raise critical alarms by sending an email. The email client on the controller should support SMTP outbound authentication and TLS encryption. The vendor should specify if all features are available with the basic access controller pricing or if the support of some features require the acquisition of some licenses. The vendor should specify which feature requires which type of licensing including its cost. Controller should have BYOD features and Guest Access management procedure where user may use internet without entering to Enterprise SSID and should be time restricted. QoS features 26 per SSID or dynamic Per user bandwidth Rate Limiting 27 Support advanced multicast features and WMM support to provide best performance on Video applications. 28 Should have Voice Call Admission control Client Management The controller should provide a Guest Login portal in order to authenticate users that are not part of the organization. | 20 | Architecture with thick AP deployment. While Encryption / decryption of 802.11 packets should be able to perform at the | |
| mesh topology on floor plans. The controller should be able to raise critical alarms by sending an email. The email client on the controller should support SMTP outbound authentication and TLS encryption. The vendor should specify if all features are available with the basic access controller pricing or if the support of some features require the acquisition of some licenses. The vendor should specify which feature requires which type of licensing including its cost. Controller should have BYOD features and Guest Access management procedure where user may use internet without entering to Enterprise SSID and should be time restricted. QoS features 26 per SSID or dynamic Per user bandwidth Rate Limiting 27 Support advanced multicast features and WMM support to provide best performance on Video applications. 28 Should have Voice Call Admission control Client Management The controller should provide a Guest Login portal in order to authenticate users that are not part of the organization. | 21 | device type based policies i.e allow or deny, Bandwidth rate | |
| 23 an email. The email client on the controller should support SMTP outbound authentication and TLS encryption. The vendor should specify if all features are available with the basic access controller pricing or if the support of some features require the acquisition of some licenses. The vendor should specify which feature requires which type of licensing including its cost. Controller should have BYOD features and Guest Access management procedure where user may use internet without entering to Enterprise SSID and should be time restricted. QoS features 26 per SSID or dynamic Per user bandwidth Rate Limiting 27 Support advanced multicast features and WMM support to provide best performance on Video applications. 28 Should have Voice Call Admission control Client Management The controller should provide a Guest Login portal in order to authenticate users that are not part of the organization. | 22 | | |
| basic access controller pricing or if the support of some features require the acquisition of some licenses. The vendor should specify which feature requires which type of licensing including its cost. Controller should have BYOD features and Guest Access management procedure where user may use internet without entering to Enterprise SSID and should be time restricted. QoS features 26 per SSID or dynamic Per user bandwidth Rate Limiting 27 Support advanced multicast features and WMM support to provide best performance on Video applications. 28 Should have Voice Call Admission control Client Management The controller should provide a Guest Login portal in order to authenticate users that are not part of the organization. | 23 | an email. The email client on the controller should support | |
| 25 management procedure where user may use internet without entering to Enterprise SSID and should be time restricted. QoS features 26 per SSID or dynamic Per user bandwidth Rate Limiting 27 Support advanced multicast features and WMM support to provide best performance on Video applications. 28 Should have Voice Call Admission control Client Management 29 The controller should provide a Guest Login portal in order to authenticate users that are not part of the organization. | 24 | basic access controller pricing or if the support of some features require the acquisition of some licenses. The vendor should specify which feature requires which type of licensing including | |
| 26 per SSID or dynamic Per user bandwidth Rate Limiting 27 Support advanced multicast features and WMM support to provide best performance on Video applications. 28 Should have Voice Call Admission control Client Management 29 The controller should provide a Guest Login portal in order to authenticate users that are not part of the organization. | 25 | management procedure where user may use internet without | |
| 27 Support advanced multicast features and WMM support to provide best performance on Video applications. 28 Should have Voice Call Admission control Client Management The controller should provide a Guest Login portal in order to authenticate users that are not part of the organization. | | | |
| provide best performance on Video applications. 28 Should have Voice Call Admission control Client Management The controller should provide a Guest Login portal in order to authenticate users that are not part of the organization. | 26 | - | |
| Client Management The controller should provide a Guest Login portal in order to authenticate users that are not part of the organization. | 27 | provide best performance on Video applications. | |
| The controller should provide a Guest Login portal in order to authenticate users that are not part of the organization. | 28 | | |
| authenticate users that are not part of the organization. | | | |
| The solution should be able to provide a web-based application | 29 | authenticate users that are not part of the organization. | |
| that allows non-technical staff to create Guest accounts with validity for fixed duration like hours or days. | 30 | | |

| 31 | System should be able to send password direct through Email and SMS to the user. | |
|----|--|--|
| 32 | System should be able to generate one click password for single user, multiple users or single user multiple devices. | |
| 33 | System should support user management features like Rate limiting based on time based WLAN Access & User profile per WLAN etc. | |
| | Regulatory | |
| 34 | Wi-Fi Alliance certified | |

2.2 Wireless Access Point with Mounting Kit

| | Description | Compliance (Yes/No |
|---|---|--------------------|
| | The Access Point should have 1 Port 10/100/1000Mb POE | |
| | Uplink port. | |
| | 802.11n Access Point should be able to power up using | |
| | standards 802.3af POE input, and at the same time operate in | |
| | full MIMO mode. It must have option to power through 12 | |
| | VDC power Adaptor also. | |
| | AP should have Dual Radios to support 2.4 GHz & 5Ghz concurrent users with 802.11 a/b/g/n capability. AP Must | |
| | support 2x2 MIMO. | |
| | 4 AP should be able to handle 400 or more Concurrent users. | |
| | | |
| | AP should provide minimum 26 dBm RF output power for 2.4Ghz and 24 dBm for 5Ghz. (EIRP should be limited as per | |
| | govt regulation for indoor AP's). | |
| | 6 AP should have -100 dB or better Receiver Sensitivity. | |
| | Access Points can perform encryption / decryption on itself so | |
| | as not to bottleneck the controller | |
| | Support Automatic provisioning of unique encryption key to | |
| | each user/device, Highly secure: unique 63-byte pass-phrase per | |
| | user. | |
| | 9 SSID support : 16 BSSID (8 BSSID per Radio) | |
| d | 802.11n Datarates Supported: 6.5Mbps – 130Mbps (20MHz) 6.5Mbps – 300Mbps (40MHz) | |
| 1 | The access point should support 802.1q VLAN tagging | |
| 1 | Antenna: Integrated omni-directional, with min 3 dB Gain for | |
| 1 | 2.4Ghz and 5Ghz both. | |
| 1 | Implement Wi-Fi alliance standards WMM, 802.11d, 802.11h | |
| 1 | and 802.11e | |
| 1 | AP Must support spectrum Analysis to detect RF interference in | |
| 1 | indoor area. | |
| | AP Must support Polarization Diversity (both Horizontal and | |
| 1 | , 1 | |
| | clients and consistent performance while clients change their | |

| | orientation. | |
|----|--|--|
| | | |
| 18 | Should support the operating temp 0° to 50° C and Humidity: 10 to 95% non-condensing. | |
| 19 | The access point should support following security mechanism: WEP, WPA-PSK, WPA-TKIP, WPA2 AES, 802.11i. | |
| 20 | System should support Authentication via 802.1X, local authentication database, support for RADIUS and Active Directory. | |
| 21 | Access points should have antitheft mechanism like Kensington lock. | |
| | • Web User Interface (HTTP/S) • CLI (Telnet/SSH), SNMP v1, 2, 3 | |
| 22 | Should be managed by Controller or standalone if required | |
| 23 | WEEE/RoHS compliance, EN 60601-1-2, Wi-Fi Alliance certified | |
| 24 | Should be WPC approved; ETA certificate to be enclosed | |

Annexure-III

Price Schedule For Supply, Installation And Commissioning Of Active And Passive Network Components For Establishment Of Campus Area Network For North Lakhimpur College, Lakhimpur, Assam.

To.

The Registrar & CPO, ERNET India 10th Floor, Jeevan Prakash Building, CP, New Delhi-110001

PRICE BID FORMAT

| S. No. | | Make & Model | Qty (A) | Unit price in INR {Inclusive of onsite warranty for 1 years} (B) | Sales Tax / Service Tax/ Etc. (C) | WCT (D) | Total price in INR E={(A*(B+C+D))} |
|-------------|--------------|-----------------|---------|--|--|---------|---------------------------------------|
| 1 | _ | | | | | | |
| 2 | | | | | | | |
| 3 | As per | | | | | | |
| • | clause 1 of | | | | | | |
| • | Annexure - I | | | | | | |
| • |]• | | | | | | |
| | - | | | | | | |
| • | • | | | | | | |
| • | • | | | | | | |
| • | • | | | | | | |
| • | - | | | | | | |
| • | | | | | | | |
| Grand Total | | | | | | | |

Important Note:

1. The grand total will be used for calculation of L1.

The price format should be appended with following text.

1. 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/services required and our offer is to supply goods/services strictly in accordance with the requirement

Dated ______2014

| and terms | and conditions | of the tender. | We | agree to | abide | unconditionally | to all | the | terms | and |
|------------|----------------|----------------|----|----------|-------|-----------------|--------|-----|-------|-----|
| conditions | of the tender | | | | | | | | | |

| 2. | We hereby offer to supply the bandwidth/services/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. |
|----|---|
| | (Signature and seal of Manufacturer/Bidder) |

Annexure-IV

Bank Guarantee No.....

PROFORMA FOR BANK GUARANTEE FOR CONTRACT PERFORMANCE

(To be stamped in accordance with stamp Act) (The non-judicial stamp paper should be in the name of issuing Bank)

(As per clause nos. 16 of Section – A and 14 of Section - D)

| Ref Date |
|---|
| To ERNET India Department of Electronics & Information Technology Govt. Of India. 10 th floor, Jeevan Prakash Building, K G Marg, New Delhi- 110001 |
| Dear Sirs, |
| In consideration of the ERNET India, Department 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 awarded to M/s |
| |
| Wehaving its (Name & Address) 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 the Owner, on demand any and all money payable by the Contractor to the extent of |
| 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 then 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.

Notwithstanding anything mentioned herein above our liability under this guarantee is restricted to

| 1 | y M/son whose behalf this guarantee has |
|--------------------------------------|---|
| WITNESS | <u>BANK</u> |
| Signature | Signature |
| Name | Name(Bank's Rubber Stamp) |
| Official address | |
| Designation with Bank Stamp | |
| Attorney as per Power of Attorney No | |
| | Date |