International Institute of Information Technology, Bangalore

(Myanmar Institute of Information Technology Mentoring Centre)

Tender Terms & Conditions for the
Supply, Installation, Testing, Commissioning and onsite support for networking components of MlIT Project, Mandalay, Myanmar

(Delivery, Installation and Commissioning at Mandalay, Myanmar)

Tender No: - MIIT/38/17

Tender Document for Supply, Installation, Testing, Commissioning(SITC) and onsite support for networking components of MlIT Project, Mandalay, Myanmar

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Tender Document for Supply, Installation, Testing, Commissioning(SITC) and onsite support for networking components of MIIT Project, Mandalay, Myanmar

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SECTION I: INVITATION FOR BIDS (IFB)

International Institute of Information Technology (IIIT) Bangalore on be-half of Ministry of External Affairs (MEA) invites sealed tenders from eligible bidders for Supply, Installation, Testing, Commissioning(SITC) and onsite support for networking components of Myanmar Institute of Information and Technology (MIIT) Project at Mandalay in Myanmar on turnkey basis.

1. Contact information -

The Registrar,
International Institute of Information Technology,
26-C Electronics City Phase I,
Off Hosur Road,
Bangalore 560100
Tel No.: +91-80-41407777
Fax No.: +91-80-4140 7704
E-mail: registrar@iiitb.ac.in

2. Two bid System -

i) The tender document can be downloaded from the websites: **www.iiitb.ac.in** or **www.mea.gov.in** or **www.eprocure.gov.in**. Two bid system will be followed for this tender. In this system bidder must submit his offer in two separate sealed envelopes as explained below:

▪ **Envelope No. 1: "Technical Bid" shall contain:**

a. Tender Fee in the form of Demand Draft for Rs. 2000/- drawn on any Nationalized/ Scheduled Bank, in favour of 'International Institute of Information Technology, Bangalore' payable at Bangalore.

b. Earnest Money in the form of Demand Draft/ Bank Guarantee of Rs. 24 Lacs from any Nationalized/ Scheduled Bank, in favour of 'International Institute of Information Technology, Bangalore' payable at Bangalore as mentioned at Para 6 (Section II).

c. Duly filled Technical Bid with proper seal and signature of authorised person on each page of the bid submitted. The person signing the bid should be the duly authorised representative of the firm/ company whose signature should be verified and certificate of authority should be submitted. The power or authorisation or any other document consisting of adequate proof of the ability of the signatory to bind the firm/ company should be annexed to the bid.

d. Self-Attested copy of VAT/ CST, Service Tax Number/ Registration certificate, as applicable.

e. A certificate by the auditor/ CA/ CS indicating the turnover of the firm should be enclosed. The bidder should have minimum average turnover of Rs 3.6 Crores in last three financial years.

f. All documents related with Firm Registration/ Partnership Deed/ Articles of Memorandum of Association or Proprietorship Deed, Certificate of Incorporation should be attached.

g. Relevant ISO certificate in IT Infrastructure.

h. Only the authorised distributors/ resellers are allowed to bid for the items mentioned in the tender document. The specific authorisation letter from Principal/s clearly indicating that the bidder is competent to sell & provide services for the items mentioned in the Scope of Supply given in this tender document should be enclosed.

i. The copy of Supply Orders/ Contracts/ Agreements issued by/ signed with Government of India (Ministry/ Department/ Undertaking/ PSU/ Educational Institutions such as IIT's, NIT's, or other such Central Universities/Banking sector/IT SEZs/Technology parks/ Stock orcommodity exchanges and reputed private organizations including educational institutions in India) for similar work, executed by the bidders in last five years ending March 31st 2017. The bidder should enclose the completion certificate duly issued by the end user. The bidder should have completed at least **ONE** similar work not less than Rs. 9.6 Crore OR **TWO** similar works not less than Rs. 6.0 Crore OR **THREE** similar works not less than Rs. 4.8 Crore. The similar work means supply & installation & on-site support of all/ most of the items mentioned in this tender document in a single project on turn-key basis in India/ abroad.

j. The installation and warranty services are required in Myanmar. The bidder should submit along with the technical bid; the detail plan for providing warranty service at site(s). The bidders should have their own branch office/ service centre in Myanmar or plans to provide service through local dealer/ service provider there. In either case, an undertaking to this effect should be submitted along with the technical bid. The details viz. name, address, contact person, telephone / fax, email etc. should be provided along with an undertaking from this local dealer/ service provider within 30 (thirty) days of the receipt of Supply Order from IIIT Bangalore (if applicable).

k. The detailed technical specification, make & model and compliance to the Schedule of Requirement (Section IV) should be provided in the technical bid.

l. Undertaking to the effect that all the tender terms & conditions are acceptable to the bidder.

m. Undertaking to the effect that a Performance Bank Guarantee (PBG) of 10% of the order value will be submitted within 15 (fifteen) days of the receipt of Supply Order from IIIT Bangalore.

n. Other related documents, mentioned in the tender document but not listed here.

ii) **Envelope 2: "Commercial Bid "shall contain:**

Price schedule completed in all respects with proper seal and signature of authorised person.

Both the technical bid and commercial bid envelopes should be sealed separately and clearly marked as "Envelope no. 1 - Technical Bid" and "Envelope no. 2 - Commercial Bid" both the sealed envelopes should be placed in third larger envelope clearly mentioning "Technical Bid & Commercial Bid" for supply, installtion & commissioning and on-site support of IT Hardware & Software for setting up of MIIT in Mandalay, Myanmar, and addressed to:
The Registrar,
International Institute of Information Technology,
26-C Electronics City Phase I,
Off Hosur Road,
Bangalore 560100
Tel No.: +91-80-41407777
Fax No.: +91-80-4140 7704
E-mail: registrar@iiitb.ac.in
Please write the **tender number** on each envelope and seal all the envelopes.

3. **Pre Bid Meeting:**
The pre-bid meeting shall be held on **4th May 2017** at **1100 Hrs** at
International Institute of Information Technology,
26-C Electronics City Phase I,
Off Hosur Road,
Bangalore 560100
Tel No.: +91-80-41407777
Fax No.: +91-80-4140 7704
E-mail: registrar@iiitb.ac.in

Maximum 2 (Two) participants per bidder will be allowed to participate in the Pre – Bid Meeting. The queries, if any, will have to be submitted in writing on/ before the day of Pre – Bid Meeting and the answers to the queries will be made available on our website. ***No queries shall be entertained after the Pre – Bid Meeting.***

4. Date of submission of bids and opening of the Technical bids

Last date for submission of bids on **24th May 2017** up to **1300 Hrs** at:

> International Institute of Information Technology,
> 26-C Electronics City Phase I,
> Off Hosur Road,
> Bangalore 560100
> Tel No.: +91-80-41407777
> Fax No.: +91-80-4140 7704
> E-mail: registrar@iiitb.ac.in

Technical bid will be opened on **24th May 2017** at **1500 Hrs** at IIIT Bangalore

The bid can be submitted in person or through post/ courier (IIIT Bangalore shall not be responsible for any postal delays resulting in disqualification/ rejection of any bid) so as to reach on or before the due date and time. The bidders 'authorized representative (maximum two) can attend the bid opening/s.

The representatives of bidders may choose to attend the opening of the technical bids. In case bidder requires any clarifications / information they may contact IIIT Bangalore address given in Clause 2 of Section I.

The technical bids will be evaluated to shortlist the eligible bidders. The technical bids of only the short listed bidders shall be considered for further processing (technical evaluation).

Bidder whose technical bid is found to be acceptable and meeting the eligibility requirements as specified in this tender will be informed about the date and time of the opening of the price bid.

Note: Please do not put "Price Bid" (prices quoted) in the technical bid envelope. If the price quoted is submitted with technical bid the tender will be rejected.

5. Opening of Price bids

Price bids of the technically responsive bidders only will be opened, in the presence of the bidders or their authorized representative, who choose to attend, at the **time place and date** to be informed later.

The authorized representative of bidders, present at the time of opening of the bids shall be required to sign an attendance register as a proof of having attended the commercial bid opening.

The bidder's name, bid prices, discounts and such other details considered as appropriate by IIIT Bangalore, will be announced at the time of the opening of the bids.

(Technically accepted competitive bids ONLY will be considered for the opening of Price Bids).

END OF SECTION I

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SECTION II: INSTRUCTIONS TO BIDDERS (ITB)

1. **Delivery Period / Project Timelines**

   The delivery and installation at site(s) must be completed within 190 days from the date of placement of supply order by IIIT Bangalore. All the necessary spare parts and tools required for installation and commissioning of the tendered item will have to be supplied along with the tendered items. The custom clearance of the equipment would be facilitated by Indian Mission in Myanmar. The tendered equipment will be exempted from payment of Myanmar custom duties. It is mandatory for the bidders who respond to this bid to meet these expectations as time is the essence of this contract and is tightly linked to completing the project within the available time frame.

2. **Locations for the Supply, Installation & Warranty Services**

   The items as detailed in this document are required to be supplied and installed at Myanmar Institute of Information Technology (MIIT) at Mandalay in Myanmar. The address of the site(s) for supply/ installation shall be communicated in the Supply Order.

3. **Order Placements and Release of Payment**
   The supply order and payment shall be released by:

   International Institute of Information Technology,
   26-C Electronics City Phase I,
   Off Hosur Road,
   Bangalore 560100

4. **Eligible Bidders**

   4.1 **Experience: (a)** Those bidders who are regular manufacturers of the tendered item should provide documentary evidence in support of their experience in the form of past purchase orders and their successful completion certificates for the tendered item. The purchase orders and successful completion certificates should be on the name of the bidders in any of the past 5 years (2012-2017) clearly mentioning that the bidder has satisfactorily executed supply, installation and commissioning of the tendered equipment. The bidders shall furnish "End User Certificates" indicating contact details i.e. name of person, phone/fax/mobile nos. etc where the equipment is installed. End User Certificates/Client Certificates submitted by the bidder along with the bid shall be subject to verification. **(b)** Those bidders who are authorized agents of the regular manufacturers of the tendered item should provide documentary evidence in support of experience in the form of past purchase orders and their successful completion certificates for the tendered item. The purchase orders and successful completion certificates should be either on the name of the bidding agent or in the name of the Principal/ manufacturer in any of the past 5 years (2012-2017) clearly mentioning that the bidder or its Principal has satisfactorily executed supply, installation and commissioning of the tendered equipment. The bidding agent shall furnish an undertaking/ authorization from the Principal/ Manufacturer for participating in this tender clearly mentioning that all necessary support for installation and commissioning of the tendered equipment shall be provided by the Principal to the bidding agent. The bidders shall furnish "End User Certificates" indicating contact details i.e. name of person, phone/fax/mobile nos. etc where the equipment is installed. End User Certificates/Client Certificates submitted by the bidder along with the bid shall be subject to verification.

   4.2 The copy of Supply Orders/ Contracts/ Agreements issued by/ signed with Government of India (Ministry/ Department/ Undertaking/ PSU/ Educational Institutions such as IIT's, NIT's, or other such Central Universities/Banking sector/IT SEZs/Technology parks/ Stock orcommodity exchanges and reputed private organizations including educational institutions in India) for similar work, executed by the bidders in last five years ending March 31st 2017. The bidder should enclose the completion certificate duly issued by the end user. The bidder should have completed at least **ONE** similar work not less than Rs. 9.6 Crore OR **TWO** similar works not less than Rs. 6.0 Crore OR **THREE** similar works not less than Rs. 4.8 Crore. The similar work means supply & installation & on-site support of all/ most of the items mentioned in this tender document in a single project on turn-key basis in India/ abroad.

4.3 The bidder should have minimum average turnover of Rs 3.6 Crore in the last three financial years.

4.4 Bidder should be **authorised distributors/ resellers** for all the items as mentioned in the tender document.

4.5 The bidders should have their **own branch office/ service centre** in Myanmar or arrangement to provide service through local dealer/ service provider.

4.6 Bidder should be registered with Sales Tax/ Income Tax Department of Government of India and should possess a valid **VAT/ CST, Service Tax** Number/ Registration as on date of bid submission.

4.7 Bidders should not have been blacklisted or declared ineligible for **corrupt and fraudulent** practices.

Note: IIIT Bangalore reserves the right to award/ reject the orders to any particular bidder without assigning any reason thereof

5. Amendment of Bidding Document

5.1 At any time prior to the deadline for submission of bids, IIIT Bangalore may, for any reason, whether on its own initiative or in response to the clarification request by a prospective bidder, modify the bid document.

5.2 All prospective bidders who have purchased the bidding document will be notified of the amendment in writing, and such amendments/ modifications will be binding on them.

5.3 IIIT Bangalore at its discretion may extend the deadline for the submission of bids if the bid document undergoes changes during the bidding period, in order to give prospective bidders time to take into the consideration the amendments while preparing their bids.

A. PREPARATION OF BIDS

Bid Form should be submitted by all bidders as per format provided on page 14 of the bid document. In case Bid Form is not submitted by the Bidder as per format, their bid shall be liable for rejection. Bidder should avoid, as far as possible, corrections, overwriting, erasures or postscripts in the bid documents. In case however any corrections, alterations, changes, erasures, amendments and/or additions have to be made in the bids, they should be supported by dated signatures of the same authorized person signing the bid documents. The bidders shall sign all the Terms and Conditions of the tender document in each page in token of accepting the conditions and enclose with the bid.

Local Conditions: It will be imperative on each Bidder to fully acquaint himself of all the local conditions and factors that would have any effect on the performance of the contract and cost of the Goods. The Purchaser shall not entertain any request for clarifications from the Bidder regarding such local conditions. No request for the change of price, or time schedule of delivery of Goods shall be entertained after the Purchaser accepts the Bid.

6. Earnest Money Deposit (EMD)

6.1 The tender documents must be accompanied by Earnest Money Deposit of Rs. 24 Lac in the form of a Demand Draft (DD) drawn on any Nationalized/ Scheduled Bank, in favour of 'International Institute of Information Technology, Bangalore' payable at Bangalore OR Bank Guarantee (BG) as per the format provided in this document (Section V 2 – Bank Guarantee towards EMD) from any Nationalized/ Scheduled Bank in favour of 'International Institute of Information Technology, Bangalore' payable at Bangalore valid for 225 days from the date of bid opening.

6.2 Bids submitted without EMD will stand rejected. EMD will not be accepted in the form of cash/ cheque/ FDR or any other form except DD or BG. No interest shall be payable on EMD. The bidders registered with NSIC / MSME may claim exemption from submission from EMD. In this case bidder should submit a copy of valid NSIC/MSME registration certificate along with the technical bid. If bidder submits NSIC/MSME certificate in lieu of EMD then its technical competence to participate in the tender would be ascertained.

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6.3 The EMD will be returned to the bidder(s) whose offer is not accepted by IIIT Bangalore. In case of the bidder(s) whose offer is accepted the EMD will be returned on submission of Performance Bank Guarantee (Refer Clause 8 of Section III). However, if the return of EMD is delayed for any reason, no interest/ penalty shall be payable to the bidder.

6.4 The successful bidder, on award of contract / order, must send the contract/ order acceptance in writing, within 7 days of award of contract/ order, failing which the EMD will be forfeited.

6.5 The EMD shall be forfeited:

6.5.1   If the bidder withdraws the bid during the period of bid validity specified in the tender.

6.5.2   In case a successful bidder, fails to furnish the Performance Bank Guarantee (Clause 8 of Section III).

6.5.3   If the bidder fails to furnish the acceptance in writing, within 7 days of award of contract/ order.

7. Period of validity of bids

7.1 Bids shall be valid for minimum 180 days from the date of submission. Bid valid for a shorter period shall stand rejected.

7.2 IIIT Bangalore may ask for the bidder's consent to extend the period of validity. Such request and the response shall be made in writing only. The bidder is free not to accept such request without forfeiting the EMD. A bidder agreeing to the request for extension will not be permitted to modify his bid.

B. SUBMISSION OF BIDS

The Bid shall be neatly arranged, plain and intelligible. Each page of the bid should be signed by the authorized person. They should not contain any terms and conditions, printed or otherwise, which are not applicable to the Bid. The conditional bid will be summarily rejected. Insertions, postscripts, additions and alterations shall not be recognized, unless confirmed by bidder's signature.

8. Deadline for Submission of Bids

8.1 Bids must be received by IIIT Bangalore before the due date and time at the address specified in the tender document. In the event of the specified date for the submission of bids being declared as a holiday then the bid-closing deadline will stand extended to the next working day up to the same time.

8.2 IIIT Bangalore may extend this deadline for submission of bids by amending the bid documents and the same shall be suitably notified in the websites.

9. Late Bids

9.1 Any bid inadvertently received by IIIT Bangalore after the deadline for submission of bids, will not be accepted and returned unopened to the bidder.

C. BID OPENING AND EVALUATION OF BIDS

10. Opening of Bids

10.1   The technical bids will be evaluated to shortlist the eligible bidders. The technical bids of only the eligible bidders shall be considered for further processing (technical evaluation).

10.2   Bidder whose technical bid is found to be acceptable and meeting the eligibility requirements as specified in this tender will be informed about the date and time of the opening of the commercial bid.

10.3   IIIT Bangalore will open price bids of only the technically short listed bids, in the presence of the bidder or their authorised representative who choose to attend the bid opening, at the time and date to be informed later.

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10.4 The bidder's authorised representative who attends the bid opening shall sign an attendance register as a proof of having attended the bid opening.

10.5 The bidder's name, bid prices, discounts and such other details considered as appropriate by IIIT Bangalore will be announced at the time of opening of the price bids.

11. Comparison of Bids

11.1 Only the eligible and technically short-listed bids after the technical evaluation shall be considered for price/ commercial comparison.

11.2 The comparison shall also take into consideration the delivery schedule, payment terms etc. offered by the bidder in its technical bid. The bid not adhering to the terms as mentioned in Section II & III will stand rejected.

D. AWARD OF CONTRACT

12. Evaluation of Proposals & Award Criteria

12.1 The bidder must quote for all the items mentioned under Section IV – Schedule of Requirement. The lowest price criteria shall be applied on the total composite amount of all items taken together.

12.2 Preliminary scrutiny of the proposal will be made to determine whether they are complete, required processing fee and bid security have been furnished, whether the documents have been properly signed, and whether the bids are generally in order. Proposals not conforming to such preliminary requirements will be prima facie rejected.

12.3 Bids complying with all the eligibility requirements mentioned under Section II Clause 4 of the tender document and fulfilling the specifications and requirement mentioned under Section IV – Schedule of requirement of the tender document shall be treated as substantially responsive bids. Responsiveness of the bids shall be determined on the basis of the contents of the bid itself and shall not be determined by extrinsic evidences. The bid form as per the format signed by the bidder shall supersede deviation(s) mentioned in other part of the bid if any.

12.4 IIIT Bangalore may ask bidders for presentation on the solution offered, if required. IIIT Bangalore may also ask bidders for submission of missing/ additional documents, if required, for comprehensive evaluation of bids. Failure on part of bidder to arrange the documents/ presentation on the date & place fixed shall result in the rejection of technical bids and financial bids of these bidders shall not be opened. Also, if it is found after presentation or submission of additional documents that the solution offered is not meeting the specifications prescribed by, such bidders shall be treated as substantially non-responsive. IIIT Bangalore's decision shall be final in this regard. The place for presentation shall be conveyed to the bidders at an appropriate date.

12.5 IIITB would evaluate the technical bids based on the following criterion

S.No	Criteria	Points
1	Technical capabilities and human resource	3.0
2	Financial strength of the company	2.5
3	Past Experience with similar projects	2.5
4	OEM/OEM Licensed Manufactures	1.0

The bidders must attain a minimum score of 6.0 to be considered technically responsive.

12.6 Price/ Commercial bids of only those bidders will be opened who are found to be substantially responsive and the work shall be awarded to the commercially lowest bidder.

12.7 Bidder should quote their rates in prescribed Performa (Section V – Price Schedule) only. Price/ Commercial bids other than the format provided shall be rejected by IIIT Bangalore.

12.8 In case of discrepancy between words and figures, the rates quoted in words shall be treated as final. The amount will be calculated by multiplying correct price with quantity and in case of any discrepancy, the corrected amount shall be considered and total of all corrected amount shall be bidder's total quoted amount.

12.9 In the copies of supply order/ contract/ agreement/ experience certificate submitted by the bidder, the currency is other than Indian Rupees, the value of work in Indian Rupees shall be determined by using the exchange rate declared by Reserve Bank of India as on the last date of submission of technical/ price bids and the eligibility of the bidder shall be determined accordingly.

12.10 If more than one bidder happens to quote the same lowest price, IIIT Bangalore reserves the right to split the order and award the contract to more than one bidder. The splitting in such case will be done on the basis of item wise lowest price quoted by the bidders.

12.11 No Bidder shall contact the Purchaser on any matter relating to his Bid from the time of the Bid opening to the time the contract is awarded.

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

13. Purchaser's Right to amend Scope of Work

13.1 If, for any unforeseen reasons, IIIT Bangalore is required to change the Scope of Supply, this change shall be acceptable to the bidder without change in the unit price quoted.

13.2 IIIT Bangalore reserves the right to reject one/ all the bids or cancel the tender without assigning any reasons there for.

13.3 IIIT Bangalore reserves the right to accord relaxation uniformly to all the bidder in case the bid submitted by all the bidders are found to have minor deviation.

14. Corrupt or Fraudulent Practices

14.1 It is expected that the bidders who wish to bid for this project have highest standards of ethics.

14.2 IIIT Bangalore will reject bid if it determines that the bidder recommended for award has engaged in corrupt or fraudulent practices while competing for this contract;

14.3 IIIT Bangalore may declare a vendor ineligible, either indefinitely or for a stated duration, to be awarded a contract if it at any time determines that the vendor has engaged in corrupt and fraudulent practices during the execution of contract.

14.4 The successful bidder would be required to submit an undertaking of authenticity for the IT equipment to be supplied in the format provided in Annexure 5 of Section V.

15. Interpretation of the clauses in the Tender Document / Contract Document

15.1 In case of any ambiguity/ dispute in the interpretation of any of the clauses in this Tender Document; Director IIIT Bangalore and MEA's interpretation of the clauses shall be final and binding on all parties.

END OF SECTION II

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SECTION III: SPECIAL CONDITIONS OF CONTRACT (SCC)

1. **Prices**

   1.1. The price quoted shall be considered firm and no price escalation will be permitted.

   1.2. Bidders should quote the prices in INR(for Indian Bidders) or in US $(for foreign bidders) and as per the format given in Price Schedule at Section – V of this document. If the rates are quoted in US Dollars then for the purpose of evaluation of price bids, the prevailing rate of exchange as on the date of technical bid opening will be taken into account for arriving at the equivalent rupee value of the quote.

   1.3. The prices quoted should be inclusive of freight, insurance, packing, applicable taxes & duties till destination. The packing shall be transport worthy so as to prevent their damage or deterioration to goods during transit to their final destination as indicated in this document. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, and the remoteness of the Goods final destination and the absence of heavy handling facilities at all point in transit. However risk in good shall continue with supplier till goods are delivered in good condition and installed at end user's site.

2. **Taxes and Duties:**

   2.1. The prices quoted should be inclusive of all taxes and /or duties except customs duty. The items being imported into Myanmar for this project will be exempted from payment of customs duty. Necessary Custom Duty Exemption Certificate shall be provided by Government of Myanmar. The Indian Mission in Myanmar will facilitate in obtaining the custom duty exemption certificate.

   2.2. Bidder shall arrange to clear the consignment after following customs formalities at Myanmar and arrange to deliver the consignment to the end user. The cost and risk of the consignment rests with the bidder till it is delivered to the end user.

   2.3. The basic prices and applicable taxes should be mentioned separately. The exact rates of taxes applicable, if any, as on the date of quoting must be mentioned. No concessional tax form (C/D) will be given by IIIT Bangalore.

3. **Software Licenses:**

   The software mentioned in Schedule of Requirement is for MIIT in Myanmar hence the bidders should quote the licenses legally valid in Myanmar. The licenses shall contain paper licenses and at least one set of media (DVD's/CDs).

4. **Chartered Engineer Certificate:**

   The successful bidder will be required to furnish the certificate from the Registered Chartered Engineer certifying that the items supplied and their specifications are in compliance with the requirements of the supply order issued by IIIT Bangalore.

5. **Completeness Responsibility:**

   Notwithstanding the scope of work, engineering, supply and services stated in bid document, any equipment or material, engineering or technical services which might not be even specifically mentioned under the scope of supply of the vendor and which are not expressly excluded there from but which are necessary for the establishment of MIIT in Myanmar in accordance with the specification and executing the contract to establish achievement of performance guarantee parameters, are to be provided for and rendered by the vendor without any extra charge so that the said project is completed in all respect.

6. **Warranty:**

   All the items covered in the schedule of requirements, shall carry minimum 3 (Three) years on site comprehensive warranty from the date of its installation & commissioning. The bidder must undertake to provide the installation and warranty service in Myanmar. The repairing/ rectification/

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replacement/ configuration required, if any, must be done at site only. During the warranty, all complaints should be rectified within 7 days from the time of complaint. In case the rectification of fault involves replacement of some hardware the same should be carried out within 21 days form the date of intimation. Failure to do so would result in the invoking of the PBG. The PBG will be released by IIIT Bangalore only after the submission of satisfactory performance certificate issued by MIIT / Indian Mission & end-user after the completion of warranty period. The Purchaser reserves the right to reject any set of equipment found defective within 30 days after the date of acceptance of equipment. The cost towards replacement will have to be borne by the supplier.

7. Payments:

i. IIIT Bangalore shall release 5% of the payment upon purchase order subject to receipt of the performance bank guarantee as outlined in clause 8 below.

ii. IIIT Bangalore shall release 35% of the payment upon dispatch of the tendered items subject to submission of original shipping documents and BL.

iii. IIIT Bangalore shall release 30% of the payment upon delivery of the tendered items at MIIT subject to satisfactory certificate of receipt by Embassy of India, Yangon and/or MIIT/IIIT-Bangalore.

iv. Payment of 30% of the purchase order value will be made after physical verification by a Project Monitoring Committee (PMC).

v. In case of foreign bidders who quoted in US $, letter of credit(LC) will be opened and payment would be released as per 7(1), 7(2), 7(3) and 7(4).

8. Performance Bank Guarantee (PBG):

The successful bidder must submit a Performance Bank Guarantee (PBG) of 10% of the order value within 15 days of receipt of supply order by IIIT Bangalore as per the format provided (Section V3–Performance Bank Guarantee) in the tender document. This Bank Guarantee should remain valid six months beyond the period of warranty.

9. Shipping Documents and Insurance:

After the consignment is ready for dispatch, the successful bidder shall be required to furnish the following documents:

i. Chartered Engineer's Certificate

ii. Packing List

iii. Insurance Policy

iv. Invoice & other relevant document(s)

Final Dispatch Clearance Certificate (FDCC) shall be issued by IIIT Bangalore on receipt of above mentioned documents from successful bidder. Actual shipment should be done only after receipt of FDCC from IIIT Bangalore.

Insurance: The Goods supplied under the contract shall be fully insured including transit insurance against various risks as required or approved by the Purchaser arising out of transportation, storage, delivery, installation, testing and commissioning at his cost up to delivery and installation at site. Insurance policy shall be valid up to the date of Installation and commissioning of equipment. Proof of Insurance shall be made available before issuance of dispatch clearance.

10.(A) Delays in the Supplier's Performance: Delays in the Supplier's Performance: The time and the date specified in the Contract for the delivery and installation commissioning of the Goods & training shall be deemed to be the essence of the Contract. Delivery, installation and commissioning of the Goods & training and performance of Services shall be made by the Supplier in accordance with the time schedule specified by the Purchaser. An unexcused delay by the Supplier in the performance of its delivery, installation& commissioning Training obligations and performance of Services shall render the Supplier liable to any or all of the following sanctions, forfeiture of its Performance Security, imposition of liquidated damages and/or termination of the Contract for default. If at any time during performance of the Contract, the

Supplier or its sub-Supplier (s) should encounter conditions impending timely delivery of the Goods and performance of the Services, the Supplier shall promptly notify the Purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice the Purchaser shall evaluate the situation and may at his discretion extend the supplier's time for performance by such period as the purchaser may think fit and shall in the case of Force Majeure extend such time by such period as the Purchaser shall consider fair and reasonable.

(B) Liquidated Damages: If the Supplier fails to deliver, install and commission of any or all of the Goods& impart training or perform the Services within the time period(s) specified in the Contract and during the warranty period, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract price, as Liquidated Damages, a sum equivalent to 1.0% of the price of the delayed Goods or unperformed Services for each week of delay until actual delivery or performance, up to a maximum deduction of 10% of the value of the delayed portion of work.

11. **Jurisdiction:**

The disputes, legal matters, court matters, if any shall be subject to Bangalore jurisdiction only.

12. **Force Majeure:**

IIIT Bangalore may consider relaxing the penalty and delivery requirements, as specified in this document, if and to the extent that, the delay in performance or other failure to perform its obligations under the contract is the result of a Force Majeure. Force Majeure is defined as an event or effect that cannot reasonably be anticipated such as acts of God (like earthquakes, floods, storms etc.), acts of states, the direct and indirect consequences of wars (declared or undeclared), hostilities, national emergencies, civil commotion and strikes at successful bidder's OEM premises.

13. **Arbitration:** If a dispute arises out of or in connection with the contract entered into under this tender, or in respect of any defined legal relationship associated therewith or derived there from, the parties will agree to submit that dispute to arbitration under the ICADR Arbitration Rules, 1996. The number of Arbitrators shall be three. Both parties will appoint one Arbitrator each. The third Arbitrator, as the presiding Arbitrator will be appointed by both the parties on mutual consent from the ICADR panel of Arbitrators. The International Centre for Alternative Dispute Resolution will provide administrative services in accordance with the ICADR Arbitration Rules, 1996.

END OF SECTION III

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BID FORM

To:
The Registrar
International Institute of Information Technology
26-C Electronics City Phase I, Off Hosur Road
Bangalore 560100

NIT Ref. No: ……………………………….

Having examined the Bidding Documents including Addenda Nos., if any issued _____, the receipt of which is duly acknowledged, we, the undersigned, offer to supply and deliver…………………………………………… (Description of Goods and Services) in conformity with said bidding documents.

We, undertake, if our bid is accepted, to deliver the goods in accordance with the delivery and Installation schedule specified in the aforesaid bid document.

If our bid is accepted, we will submit performance security in a sum of equivalent to 10% of the Contract Price for the due performance of the contract.

We agree to abide by this bid for a period of 180 (one hundred eighty) days after the date fixed for bid opening and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal contract is prepared and executed, this bid together with your written acceptance thereof shall constitute a binding contract between us.

We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act 1988".

We confirm that stipulated Bid Security is enclosed herewith as a part of bid.

We understand that you are not bound to accept the lowest or any bid you may receive.

We accept all your terms and conditions stipulated in this bid document without deviations, both technical & techno-commercial.

Dated this…………………………….Day of………………………. 2017………………

_____

(Signature)   (In the capacity of)

Duly authorised to sign Bid for and on behalf of

_____ Signed

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SECTION IV – Schedule of Requirement

Description of Work:

The successful bidder will be required to timely deliver, install active & passive networking equipment as per specification and bill of quantity defined in the tender document. The broad overview of work but not limited to is outlined below:

- Supply &Installation of Core and Distribution Switches, Routers and Access Switches
- Wireless LAN Controller, UTM, Network Management Software Laying of UTP cables and termination of informational outlets.
- Fixing, Labeling, Dressing & Termination of Jack panels.
- Fixing & termination of MDF
- Laying of 12 Core Multi Mode Fiber & 12 Core Single Mode Fiber cable
- Fixing of LIU
- Splicing of LC style Pigtails
- Soft and Hard Soil Digging.
- Testing Number and patching of Fiber points
- Testing of Network Nodes and documentation comprising of network drawings diagram, node density diagram, etc.
- Installation services of Switches & network.

The Bill of Material & quantity

SL No	Description of Networking Component (Active Items)	Quantity	UOM
	Network Description (Active)		
1	**Networking – Active**		
1a	Supply of Campus Core Switches	2	Nos
1b	Supply of Distribution/Aggregation Switches	6	Nos
1c	Supply of 48-Port PoE User Access Switches	30	Nos
1d	Supply of 24-Port PoE User Access Switches	10	Nos
1e	Supply of Wireless LAN Controller	2	Nos
1f	Supply of Indoor Wireless LAN Access Points	200	Nos
1g	Supply of Outdoor Wireless LAN Access Points	10	Nos
1h	Supply of Network Management Software	1	Nos
1i	Supply of UTM Firewall and Intrusion Prevention System	3	Nos
1j	Supply of Gateway Routers	2	Nos
1k	Supply of AAA, NAC and BYOD Solution	2	Nos
SL No	Description of Networking Component (Passive items)	Quantity	UOM
2	**Networking – Passive** (Note: Single OEM should be there for Copper & Fiber component)		
1	Indoor Optical Fiber Cable – MMF 12 core	2500	Meter

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2	Outdoor Optical Fiber Cable – SMF 12 core	3000	Meter
3	Cat-6 Cable (305 Meters Box)	200	Box
4.1	CAT -6 I/O (1 X Data)	2250	Nos
4.2	Faceplate (Single)	2250	Nos
5.1	CAT -6 I/O (1 x Voice)	770	Nos
5.2	Faceplate (Single for Voice)	770	Nos
6.1	CAT-6 Patch Cord, UTP, 1 Meters (For Data)	2250	Nos
6.2	CAT-6 Patch Cord for Rj45 to MDF Panel (for Voice)	750	Nos
6.3	CAT-6 Patch Cord, UTP, 2 Meters (for Data)	2250	Nos
7.1	CAT -6 patch panel, unloaded,24-port, 1U	90	Nos
7.2	24-port patch panel (with modules) For Data and Voice	90	Nos
8.1	Fiber LIU, 24 –fiber, Fully-loaded Single Mode	25	Nos
8.2	Fiber LIU, 24 –fiber, Fully-loaded Multi Mode	25	Nos
9.1	Fiber Patch Cord, LC-LC SM, Duplex 2 meter (100)	100	Nos
9.2	Fiber Patch Cord, LC-LC SM, Duplex 3 meter(100)	100	Nos
10.1	Fiber Patch Cord, LC-LC MMF, Duplex 2 meter (100)	100	Nos
10.2	Fiber Patch Cord, LC-LC MMF, Duplex 3 meter (100)	100	Nos
11	Multi-pair Riser Cable, UTP, 50 pair (voice)	5500	Meter
12	Back mount Frame, 100 -pair, MDF (Full Loaded)	42	Nos
13.1	Fiber LIU, 48 –fiber, Fully-loaded Single Mode,	12	Nos
13.2	Fiber LIU, 48 –fiber, Fully-loaded Multi Mode,	12	Nos
14	Jumper Wire,100 Meters (BOX)	5	Nos
15	Rack, 42U , (800 width x 1200mm Depth) Server Rack (black color) with perforated front door & rear door, left and right solid removable side panels, confirming to international standards and designed for vendor neutral solutions for servers, networking, communication and storage devices. Rack PDU should be SNMP enabled metered with zero U mounting from the OEM of UPS, current drawn 32A, Output Voltage 230V with minimum 16 output connections on per Rack basis	3	Nos

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	Environment monitoring unit should Monitor temperature and humidity temperature and Humidity monitoring probes shall have SNMP capability (Get / Set) and made available on TCP/IP in each rack.		
	Adjustable power cable troughs and data partitions fit seamlessly into the roof of the server / Network racks to distribution power & networks cables or the bidder shall provide ceiling suspended network & power cable trays		
16	Rack, 15U, Minimum 600 (W) x 500 (D), wall mount with all required accessories	30	Nos
17	Supply & Services Velcro Tie Roll, 20 meters(roll)	200	Nos
18	Supply Mounting Hardware packet (packet of 20)	50	Nos
19	Horizontal cable manager- 1U	100	Nos
20	Supply of PVC pipe, 25mm	4000	Meter
21	Supply of PVC pipe , 32 mm	3000	Meter
22	Supply of 32 x 12 MM PVC Casing - Capping	5000	Meter
23	Supply of OFC Router Marker (for each 10 Meters on marker)	200	Nos
24	Supply of 50 MM Class B GI Pipe	2000	Meter
25	Supply of 40 MM HDPE Pipe	4000	Meter

Installation of LAN Description

SL No	Item Description	Quantity	UOM
1	Mounting & Installation of Campus Core Switches	2	Nos
2	Mounting & Installation 'of Distribution/Aggregation Switches	6	Nos
3	Mounting & Installation of 48-Port PoE User Access Switches	30	Nos
4	Mounting & Installation of 24-Port PoE User Access Switches	10	Nos
5	Mounting & Installation of Wireless LAN Controller	2	Nos
6	Mounting & Installation of Indoor Wireless LAN Access Points	200	Nos
7	Mounting & Installation of Outdoor Wireless LAN Access Points	10	Nos
8	Mounting & Installation of Network Management Software	1	Nos
9	Mounting & Installation of UTM Firewall and Intrusion Prevention System	3	Nos

10	Mounting & Installation of Gateway Routers	2	Nos
11	Mounting & Installation of AAA, NAC and BYOD Solution	2	Nos
1	Laying of Indoor Optical Fiber Cable – MMF 12 core	2500	Meter
2	Laying of Optical Fiber Cable – SMF 12 core	3000	Meter
3	Laying of Cat-6 Cable (305 Meters Box)	200	Box
4.1	Installation of CAT -6 I/O Box (1 X Data)	2250	Nos
4.2	Installation of Faceplate (Single)	2250	Nos
5.1	Installation of CAT -6 I/O (1 x Voice)	770	Nos
5.2	Installation of Faceplate (Single for Voice)	770	Nos
6.1	Installation of CAT-6 Patch Cord, UTP, 1 Meters (For Data)	2250	Nos
6.2	Installation of CAT-6 Patch Cord for Rj45 to MDF Panel (for Voice)	750	Nos
6.3	Installation of CAT-6 Patch Cord, UTP, 2 Meters (for Data)	2250	Nos
7.1	Installation of CAT -6 patch panel, unloaded,24-port, 1U	90	Nos
7.2	Installation of 24-port patch panel (with modules) For Data and Voice	90	Nos
8.1	Installation of Fiber LIU, 24 –fiber, Fully-loaded Single Mode	25	Nos
8.2	Installation of Fiber LIU, 24 –fiber, Fully-loaded Multi Mode	25	Nos
9.1	Installation of Fiber Patch Cord, LC-LC SM, Duplex 2 meter (100)	100	Nos
9.2	Installation of Fiber Patch Cord, LC-LC SM, Duplex 3 meter(100)	100	Nos
10.1	Installation of Fiber Patch Cord, LC-LC MMF, Duplex 2 meter (100)	100	Nos
10.2	Installation of Fiber Patch Cord, LC-LC MMF, Duplex 3 meter (100)	100	Nos
11	Installation of Multi-pair Riser Cable, UTP, 50 pair (voice)	5500	Meter
12	Installation of Back mount Frame, 100 -pair, MDF (Full Loaded)	42	Nos
13.1	Installation of Fiber LIU, 48 –fiber, Fully-loaded Single Mode,	12	Nos
13.2	Installation of Fiber LIU, 48 –fiber, Fully-loaded Multi Mode,	12	Nos
14	Installation of Jumper Wire,100 Meters (BOX)	5	Nos
15	Fixing & Installation of 42U Rack & Other accessories as per Specifications	3	Nos
16	Fixing & Installation of Rack, 15U, Minimum 600 (W) x 500 (D), wall mount with all required accessories	30	Nos

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17	Installation of Velcro Tie Roll, 20 meters(roll)	200	Nos
18	Supply Mounting Hardware packet (packet of 20)	50	Nos
19	Installation of Horizontal cable manager- 1U	100	Nos
20	Laying & Installation of PVC pipe, 25mm	4000	Meter
21	Laying & Installation of PVC pipe , 32 mm	3000	Meter
22	Laying & Installation of 32 x 12 MM PVC Casing – Capping	5000	Meter
23	Installation of OFC Router Marker (for each 10 Mtrs on marker)	200	Nos
24	Laying & Installation of 50 MM Class B GI Pipe	2000	Meter
25	Laying & Installation of 40 MM HDPE Pipe	4000	Meter
26	Digging of soft soil	3500	Meter
27	Digging of Hard soil	800	Meter
28	Documentation, certification & Project Management Charges	1	Lot

A) Technical Specifications (ACTIVE)

1a. Core Switches (2 Nos)

Sr. No	Specifications
1	**Architecture**
1.1	Modular architecture, minimum six slots for interface modules
1.2	Should have two dedicated management module slots in addition to the interface modules
1.3	Should have Multi-layer Architecture (CLOS / Meta Fabric /Leaf & Spine) or equivalent shared switch capability all supporting active switching to support high switching capacity.
1.4	Shall have fully distributed architecture (any additional hardware required for the same shall be proposed)
1.5	Shall provide distributed Layer-2 (switching) and Layer-3 forwarding (Routing) on all line cards (any additional hardware required need to bundled with switch)
1.6	Should have a Minimum 7 TBPS or above with aggregation of switches switching capacity
1.7	Shall have Minimum 5 Billion Packet Per Second (BPPS) of switching throughput or more
1.8	Shall supportMinimum192 Non-blocking 10G Copper ports. Shall be populated with 48 x 1GCopper RJ-45 Ports on Day 1.
1.9	Shall support Minimum192 Non-blocking 10G SFP+ ports. Shall be populated with 48 x 10G SFP+ Ports on Day 1
1.10	Chassis Shall support up to 48 Non-blocking 40-GbE ports (QSFP+). Shall be populated with 8x 40G QSFP+ Ports on Day 1 with 40G Single mode Transceivers (40G Base-LR4)

1.11	Shall be 100 G Ready Chassis	
1.12	Shall be Rack Mountable	
1.13	Shall have redundant power supply for better availability	
2	**Resiliency**	
2.1	Shall have the capability to extend the control plane across active switches making it a virtual switching fabric, enabling interconnected switches to perform as single Layer-2 switch and Layer-3 router--- VSS / IRF or Equivalent	
2.2	Shall support virtual switching fabric creation across two chassis-based switches using 10G/40G / 100G Ethernet Links	
2.3	Hot-swappable Modules	
2.4	IEEE 802.1D Spanning Tree Protocol, IEEE 802.1w Rapid Spanning Tree Protocol and IEEE 802.1s Multiple Spanning Tree Protocol	
2.5	IEEE 802.3ad Link Aggregation Control Protocol (LACP)	
2.6	Virtual Router Redundancy Protocol (VRRP) to allow a group of routers to dynamically back each other up to create highly available routed environments	
2.7	Graceful restart for OSPF, IS-IS and BGP protocols	
2.8	Bidirectional Forwarding Detection (BFD) for OSPF, IS-IS and BGP protocols	
3	**Layer 2 Features**	
3.1	Shall support up to 4,000 port or IEEE 802.1Q-based VLANs	
3.2	Shall support GARP VLAN Registration Protocol or equivalent feature to allow automatic learning and dynamic assignment of VLANs	
3.3	Shall have the capability to monitor link connectivity and shut down ports at both ends if uni-directional traffic is detected, preventing loops	
3.5	Shall support Jumbo frames on GbE and 10-GbE ports	
3.6	Internet Group Management Protocol (IGMP)	
3.7	Multicast Listener Discovery (MLD) snooping	
3.8	IEEE 802.1AB Link Layer Discovery Protocol (LLDP)	
3.9	Multicast VLAN to allow multiple VLANs to receive the same IPv4 or IPv6 multicast traffic	
4	**Layer 3 Features (any additional licenses required shall be included)**	
4.1	Static Routing for IPv4 and IPv6	
4.2	RIP for IPv4 (RIPv1/v2) and IPv6 (RIPng)	
4.3	OSPF for IPv4 (OSPFv2) and IPv6 (OSPFv3)	
4.4	IS-IS for IPv4 and IPv6 (IS-ISv6)	
4.5	Border Gateway Protocol 4 with support for IPv6 addressing	
4.6	Policy-based routing	
4.7	Unicast Reverse Path Forwarding (uRPF)	
4.8	IPv6 tunneling to allow IPv6 packets to traverse IPv4-only networks by encapsulating the IPv6 packet into a standard IPv4 packet	
4.9	Dynamic Host Configuration Protocol (DHCP) client, Relay and server	
4.10	PIM Dense Mode (PIM-DM), Sparse Mode (PIM-SM), and Source-Specific Mode (PIM-SSM) for IPv4 and IPv6 multicast applications	
4.11	MPLS and VPLS Ready	
5	**QoS and Security Features**	
5.1	Access Control Lists for both IPv4 and IPv6 for filtering traffic to prevent unauthorized users from accessing the network	
5.2	Port-based rate limiting and access control list (ACL) based rate limiting	

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5.3	Congestion avoidance using Weighted Random Early Detection (WRED)
5.4	Powerful QoS feature supporting strict priority (SP) queuing, weighted round robin (WRR) and weighted fair queuing (WFQ)
5.5	IEEE 802.1x to provide port-based user authentication with multiple 802.1x authentication sessions per port
5.6	Media access control (MAC) authentication to provide simple authentication based on a user's MAC address
5.7	Dynamic Host Configuration Protocol (DHCP) snooping to prevent unauthorized DHCP servers
5.8	Port security and port isolation
6	**Management Features**
6.1	Configuration through the CLI, console, Telnet and SSH
6.2	SNMPv1, v2, and v3 and Remote monitoring (RMON) support
6.3	sFlow (RFC 3176) or equivalent for traffic analysis
6.4	Management security through multiple privilege levels with password protection
6.5	FTP/SFTP and TFTP support
6.6	Port mirroring to duplicate port traffic (ingress and egress) to a local or remote monitoring port.
6.7	Shall support RADIUS or TACACS+ for switch security access administration
6.8	Network Time Protocol (NTP) or equivalent support
6.9	Software Defined Networking (SDN) Ready with Openflow protocol support
7	**Environmental Features**
7.1	Shall provide support for RoHS and WEEE regulations
7.2	Shall be capable of supporting both AC and DC Power inputs
7.3	Operating temperature of 0°C to 45°C
7.4	Safety and Emission standards including UL 60950-1; IEC 60950-1; VCCI Class A; EN 55022 Class A

1b. Distribution Switches (6 Nos)

Sr. No	Specifications
1	**Architecture**
1.1	Shall be Rack Mountable
1.2	Shall have dual, hot-swappable power supplies
1.3	Shall have dual, fan trays
1.4	Shall have minimum 48 port / 10G SFP+ slots & 4 no's of 40G QSFP+ slots /10G SFP+ slots. Populated with 2 no's of SMF 40G Fiber ports & 10 No's of 10G MMF transceivers
1.5	Shall support up to 24-port 1/10 SFP+
1.6	1 RJ-45 serial console port and 1 RJ-45 out-of-band management port
1.7	Shall have switching capacity of Minimum 960 GBPS
1.8	Shall have switching throughput minimum 700 Million Packets Per Second '
1.9	Distribution shall be 40G ready
2	**Resiliency**
2.1	Shall have the capability to extend the control plane across multiple active switches making it a virtual switching fabric/ stacking enabling interconnected switches to perform as single Layer-2 switch and Layer-3 router or Equivalent.
2.2	Shall support virtual switching fabric creation across multiple switches using 10G or 40G Ethernet Links.
2.3	The modules/cables to create virtual switching fabric /stack shall be provided

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2.4	IEEE 802.1D Spanning Tree Protocol, IEEE 802.1w Rapid Spanning Tree Protocol and IEEE 802.1s Multiple Spanning Tree Protocol
2.5	IEEE 802.3ad Link Aggregation Control Protocol (LACP)
2.6	Virtual Router Redundancy Protocol (VRRP) or equivalent to allow a group of routers to dynamically back each other up to create highly available routed environments.
2.7	Graceful restart for routing protocol
2.8	Shall provide hitless software upgrade with single-unit In Services Software Upgrade (ISSU) and hitless patching of modular OS
3	**Layer 2 Features (any additional licenses required shall be included)**
3.1	Shall support up to 4,000 port or IEEE 802.1Q-based VLANs
3.2	MAC address table size of minimum 128000 entries
3.3	Shall have the capability to monitor link connectivity and shut down ports at both ends if uni-directional traffic is detected, preventing loops
3.4	Shall support Jumbo frames on GbE and 10-GbE ports
3.5	Internet Group Management Protocol (IGMP)
3.6	IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
3.7	Multicast VLAN to allow multiple VLANs to receive the same IPv4 or IPv6 multicast traffic
4	**Layer 3 Features (any additional licenses required shall be included)**
4.1	Static Routing for IPv4 and IPv6
4.2	RIP for IPv4 (RIPv1/v2) and IPv6 (RIPng)
4.3	OSPF for IPv4 (OSPFv2) and IPv6 (OSPFv3)
4.4	IS-IS for IPv4 and IPv6 (IS-ISv6)
4.5	Border Gateway Protocol 4 with support for IPv6 addressing
4.6	Policy-based routing
4.7	Multiprotocol Extensions for BGP-4
5	**QoS and Security Features**
5.1	Access Control Lists for filtering traffic to prevent unauthorized users from accessing the network
5.2	Congestion avoidance using Weighted Random Early Detection (WRED)
5.3	Powerful QoS feature supporting Strict Priority Queuing (SP), Weighted Fair Queuing (WFQ), Weighted Deficit Round Robin (WDRR), SP+WDRR, Ingress Rate Limiting
5.6	IEEE 802.1X Port Based Network Access Control
5.7	DHCP Snooping support including Option 82
5.8	Port security, Directed Broadcast Control
6	**Management Features**
6.1	Configuration through secure command-line interface (CLI) over Telnet and SSH
6.2	SNMPv1, v2, and v3
6.3	sFlow (RFC 3176) or equivalent for traffic analysis
6.5	FTP / SFTP and TFTP support
6.6	Port mirroring to enable traffic on a port to be simultaneously sent to a network analyzer for monitoring
6.7	Shall support RADIUS or TACACS+ for switch security access administration
6.8	Network Time Protocol (NTP) or equivalent support
6.9	Shall support OpenFlow protocol capability to enable software-defined networking (SDN)
7	**Environmental Features**
7.1	Shall provide ROHS Compliance
7.2	Shall be capable of supporting both AC and DC Power inputs
7.3	Operating temperature of 0°C to 45°C
7.4	Safety and Emission standards including UL 60950-1; IEC 60950-1; VCCI Class A; EN 55022 Class A

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1c. 48-Port PoE Access Switches (30 Nos)

Sr. No	Specifications
1	**Architecture**
1.1	Shall be 1RU, Rack Mountable
1.2	48 RJ-45 autosensing 100/1000 ports
1.3	All the above copper ports should have IEEE802.3af PoE and IEEE 802.3at PoE+ standards with minimum 370 Watts for PoE
1.4	The switch shall have two 1G/10-Gigabit ports (SFP+) in addition to the above ports. Shall be populated with minimum two 10G Multimode Fiber Transceiver (10G Base-SR)
1.5	1 RJ-45 serial console port
1.6	512 MB SDRAM, 128MB Flash
1.7	Shall have switching capacity of minimum 125 Gbps.
1.8	Shall have up to 100 million pps switching throughput .
2	**Resiliency**
2.1	Shall have the capability to extend the control plane across multiple active switches making it a virtual switching fabric, enabling interconnected switches to perform as single Layer-2 switch and Layer-3 router:
2.2	Shall support virtual switching fabric/stacking creation across up to eight switches with minimum 40Gbps of bandwidth. Required modules/cables shall be provided
2.3	IEEE 802.1D Spanning Tree Protocol, IEEE 802.1w Rapid Spanning Tree Protocol and IEEE 802.1s Multiple Spanning Tree Protocol
2.4	IEEE 802.3ad Link Aggregation Control Protocol (LACP)
2.5	Shall support external redundant power supply
3	**Layer 2 Features**
3.1	Shall support up to 16K MAC Address Table
3.2	Shall support IEEE 802.1Q-based VLANs (4,094 VLAN IDs)
3.3	Shall support Jumbo frames on GbE and 10GbE ports
3.4	Internet Group Management Protocol (IGMP)
3.5	Multicast Listener Discovery (MLD) snooping
3.6	IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
3.7	Shall support Voice VLAN feature to assigns VLAN and priority to devices like IP phones
3.8	Shall have the capability to monitor link connectivity and shut down ports at both ends if uni-directional traffic is detected, preventing loops
4	**Layer 3 Features (any additional licenses required shall be included)**
4.1	Static Routing for IPv4
4.2	Static Routing for IPv6
4.3	Routing Information Protocol (RIP) to provide RIPv1 and RIPv2 routing
4.4	Shall support DHCP Relay to enable DHCP operation across subnets
5	**QoS and Security Features**
5.1	Access Control Lists for Layer 2 and Layer 3 traffic filtering
5.2	Powerful QoS feature supporting strict priority (SP) queuing, weighted round robin (WRR) or equivalent
5.3	IEEE 802.1x to provide port-based user authentication with multiple 802.1x authentication sessions per port
5.4	Media access control (MAC) authentication to provide simple authentication based on a user's MAC address
5.5	Dynamic Host Configuration Protocol (DHCP) protection to prevent unauthorized DHCP servers

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5.6	Port security and port isolation
5.7	STP BPDU port protection to prevent forged BPDU attacks
5.8	STP Root Guard to protect the root bridge from malicious attacks or configuration mistakes
5.9	IP Source guard to prevent IP spoofing attacks
5.10	Dynamic ARP protection blocking ARP broadcasts from unauthorized hosts
6	**Management Features**
6.1	Configuration through the CLI, console, Telnet and SSH
6.2	SNMPv1, v2, and v3 and Remote monitoring (RMON) support
6.3	sFlow (RFC 3176) or equivalent for traffic analysis
6.4	Management security through multiple privilege levels
6.5	FTP / SFTP and TFTP support
6.6	Port mirroring to mirror ingress/egress ACL-selected traffic from a switch port or VLAN to a local or remote switch port
6.7	Shall support RADIUS or TACACS+ for switch security access administration
6.8	Network Time Protocol (NTP) or equivalent support
6.9	Software Defined Networking Ready with Openflow protocol support
7	**Environmental Features**
7.1	Shall provide support for RoHS and WEEE regulations
7.2	Shall have features to improve energy efficiency like variable-speed fans, shutoff unused ports etc
7.3	Shall support Energy Efficient Ethernet (EEE) in accordance with IEEE 802.3az
7.4	Operating temperature of 0°C to 45°C
7.5	Safety and Emission standards including UL 60950-1; IEC 60950-1; VCCI Class A; EN 55022 Class A

1d. 24-Port PoE Access Switches (10 Nos)

Sr. No	Specifications
1	**Architecture**
1.1	Shall be 1RU, Rack Mountable
1.2	24 RJ-45 autosensing 100/1000 ports
1.3	All the above copper ports should have IEEE802.3 at PoE and IEEE 802.3 at PoE+ standards with minimum 200 Watts for PoE
1.4	The switch shall have two 1G/10-Gigabit ports (SFP+) in addition to the above ports. Shall be populated with minimum two 10G Multimode Fiber Transceiver (10G Base-SR)
1.5	1 RJ-45 serial console port
1.6	512 MB SDRAM, 128MB Flash
1.7	Shall have switching capacity of Minimum 100 Gbps
1.8	Shall have up to 65 million packet per second(pps)switching throughput
2	**Resiliency**
2.1	Shall have the capability to extend the control plane across multiple active switches making it a virtual switching fabric, enabling interconnected switches to perform as single Layer-2 switch and Layer-3 router--
2.2	Shall support virtual switching fabric/stacking creation across up to eight switches with minimum 40 Gbps of bandwidth. Required modules/cables shall be provided
2.3	IEEE 802.1D Spanning Tree Protocol, IEEE 802.1w Rapid Spanning Tree Protocol and IEEE 802.1s Multiple Spanning Tree Protocol
2.4	IEEE 802.3ad Link Aggregation Control Protocol (LACP)
2.5	Shall support external redundant power supply
3	**Layer 2 Features**
3.1	Shall support up to 16K MAC Address Table

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3.2	Shall support IEEE 802.1Q-based VLANs (4,094 VLAN IDs)
3.3	Shall support Jumbo frames on GbE and 10GbE ports
3.4	Internet Group Management Protocol (IGMP)
3.5	Multicast Listener Discovery (MLD) snooping
3.6	IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
3.7	Shall support Voice VLAN feature to automatically assigns VLAN and priority to devices like IP phones
3.8	Shall have the capability to monitor link connectivity and shut down ports at both ends if uni-directional traffic is detected, preventing loops
4	**Layer 3 Features (any additional licenses required shall be included)**
4.1	Static Routing for IPv4
4.2	Static Routing for IPv6
4.3	Routing Information Protocol (RIP) to provide RIPv1 and RIPv2 routing
4.4	Shall support DHCP Relay to enable DHCP operation across subnets
5	**QoS and Security Features**
5.1	Access Control Lists for Layer 2 and Layer 3 traffic filtering
5.2	Powerful QoS feature supporting strict priority (SP) queuing, weighted round robin (WRR) or equivalent
5.3	IEEE 802.1x to provide port-based user authentication with multiple 802.1x authentication sessions per port
5.4	Media access control (MAC) authentication to provide simple authentication based on a user's MAC address
5.5	Dynamic Host Configuration Protocol (DHCP) protection to prevent unauthorized DHCP servers
5.6	Port security and port isolation
5.7	STP BPDU port protection to prevent forged BPDU attacks
5.8	STP Root Guard to protect the root bridge from malicious attacks or configuration mistakes
5.9	IP Source guard to prevent IP spoofing attacks
5.10	Dynamic ARP protection blocking ARP broadcasts from unauthorized hosts
6	**Management Features**
6.1	Configuration through the CLI, console, Telnet and SSH
6.2	SNMPv1, v2, and v3 and Remote monitoring (RMON) support
6.3	sFlow (RFC 3176) or equivalent for traffic analysis
6.4	Management security through multiple privilege levels
6.5	FTP / SFTP and TFTP support
6.6	Port mirroring to mirror ingress/egress ACL-selected traffic from a switch port or VLAN to a local or remote switch port
6.7	Shall support RADIUS or TACACS+ for switch security access administration
6.8	Network Time Protocol (NTP) or equivalent support
6.9	Software Defined Networking Ready with Open flow protocol support
7	**Environmental Features**
7.1	Shall provide support for RoHS and WEEE regulations
7.2	Shall have features to improve energy efficiency like variable-speed fans, shutoff unused ports etc
7.3	Shall support Energy Efficient Ethernet (EEE) in accordance with IEEE 802.3az
7.4	Operating temperature of 0°C to 45°C
7.5	Safety and Emission standards including UL 60950-1; IEC 60950-1; VCCI Class A; EN 55022 Class A

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1e. Wireless LAN Controller (2 Nos)

Sr. No	Specifications
1	The proposed architecture should be based on centralized controller with thin AP deployment. AP's should download OS and configuration from controller. Switch/Controller for improved security.
2	The controller should be capable of supporting 500 AP's on Day 1 in thin AP deployment mode and expandable up to AP's 1500 without any addition of Hardware components.
3	The controller should have minimum two 10GBASE-X (SFP+) ports populated with 10G Base-SR Transceivers. The controller must have atleast 2 x 10Gbps of uplink interfaces.
7	Controller should have dual firmware storage
8	Controller should have capacity to handle 30000 or more concurrent devices.
9	Redundancy Features: Active: Standby; Active: Active and 1: Many redundancies. Licenses of each Wireless switch/Controller should be aggregated so that all the licenses are usable.
10	The controller should support 802.11ac standard.
11	The Controller must support an ability to dynamically adjust channel and power settings based on the RF environment. Quoted Access point must support necessary spectrum analysis functionality to achieve this.
12	The Controller RF management algorithm must allow adjacent APs to operate on different channels, in order to maximize available bandwidth and avoid interference. Quoted Access point must support necessary spectrum analysis functionality to achieve this.
13	The Controller must support interference detection and avoidance for both Wi-Fi and non-Wi-Fi interferes. Quoted Access point must support necessary spectrum analysis functionality to achieve this.
14	Must support coverage hole detection and correction that can be adjusted on a per WLAN basis.
15	The controller should support advance QOS to implement role based access for data, voice and video applications. It should support session prioritization as well like Voice ,Video,Data of MS Lync should get different QOS.
16	Controller should able to detect applications for Application based QOS, Access Control per use ror per SSID.
17	Rules for access rights should be based on any combination of time, location, user identity and device identity.
18	The controller/overlay solution should provide differentiated access for Guests and staff group on same SSID, Guests should have restricted access like not able to telnet & SSH to servers while connecting on same SSID. Similarly other ROLE BASED ACCESS policy support should be available for differentiated access.
19	The controller should provide latest network authentication (WEP, WPA, WPA2) and encryption types like DES/3DES, TKIP and AES.
20	Controller should support reliable fast roaming standards 802.11k/r
21	Controller should support management frame protection.
22	Solution must support per user Rate limiting control, like employee should get 4 MBPS and guest should get 2 mbps on same or per SSID **or Equivalent**
23	The Controller Should provide a dashboard of spectrum quality in terms of the performance and impact of interference on the wireless network identifying the problem areas, channel utilization. Quoted Access Point should support this feature to send necessary data to controller.
24	The Controller should provide an spectrum Quality detail on a per- radio basis to help gauge the impact of interference on the network. Quoted Access Point should support this feature to send necessary data to controller.
25	**Advance WIDS/WIPS Security**
26	The WLAN solution should have the HW to implement advance WIDS & WIPS from day 1.
27	WIPS solution should Automatically blacklist clients when it attempt any attack.

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29	WIPS solution should detect & prevent an Ad-hoc connection (i.e. clients forming a network amongst themselves without an AP) as well as windows bridge (client that is associated to AP is also connected to wired network and enabled bridging between two interfaces)
30	The system should detect an invalid AP broadcasting university valid SSID and should prevent valid clients getting connected from these AP's.
31	WIPS Solution should track the location of interferer objects.
32	For advance forensic WIPS solution should perform spectrum analysis to detect and classify sources of interferences. System should provide chart displays and spectrograms for real-time troubleshooting and visualization.
33	The WIPS solution should able to detect and locate the rogue access point on floor maps once detected.
34	The WIPS solution should able to detect and prevent if a client use FATA-Jack 802.11 DoS tool (Available free on internet) and tries to disconnect other stations using spoofed authentication frames that contain an invalid authentication algorithm number.
35	The WIPS solution should detect and protect if a client probe-request frame will be answered by a probe response containing a null SSID to crash or lock up the firmware of any 802.11 NIC.
36	The WIPS solution should detect and protect if a client/tool try to flood an AP with 802.11 management frames like authenticate/associate frames which are designed to fill up the association table of an AP.
37	The WIPS solution should detect and protect if a client/tool keep on sending disassociation frames to the broadcast address (FF:FF:FF:FF:FF:FF) disconnect all stations on a network for a widespread DoS.
38	The WIPS solution should detect and protect if somebody try to spoof MAC address of client or AP for unauthorized authentication.
39	The WIPS solution should detect and protect if a client/tool try de authentication broadcast attempts to disconnect all clients in range rather than sending a spoofed de auth to a specific MAC address.
40	The WIPS solution should detect and protect if an attacker attempts to lure a client to a malicious AP using university SSID on fake AP in close proximity of the university premises.It should detect When the university Client probes for University SSID and these malicious APs respond and invite the client to connect to them.
41	when client radio is in sleep mode to save battery and AP then begins buffering traffic bound for that client until it indicates that it is awake. The WIPS solution should detect and protect if intruder try sending spoofed frames to the AP on behalf of the original client to trick the AP into believing the client is asleep to buffer the AP beyond limit.

1f. Indoor Wireless LAN Access Points (200 Nos.)

Sr. No.	Specifications
	Indoor Access Points 802.11a/b/g/n/ac
	Description
1	Dual Radio Access Point should be minimum 4x4 MIMO delivering 1.7 GBPS on 5GHz and 800 Mbps on 2.4 GHz
2	Access Point should be 802.11ac Wave 2 ready from day one
3	AP should have 1 x 10/100/1000 GE LAN port.
4	Indoor Access Point should be 802.11 a/b/g/n/ac Functionality
	Support multi-user MIMO (MU-MIMO) and 4 spatial streams (4SS)
5	Offered Access Point can have integrated or external Antenna.
6	Should support Minimum 8 BSSID per AP radio.
7	Access point should support 802.11ac beam forming for 802.11ac.
8	The access point should be capable of performing security scanning and serving clients on the same radio. It should be also capable of performing spectrum analysis and security scanning using same radio or Equivalent.
10	Access point should support 802.3af/at POE standard.
11	Access point should have option of external power adaptor as well.
12	Must operate as a sensor for wireless IPS or Equivalent
13	AP model proposed must be able to be both a client-serving AP and a monitor-only AP for Intrusion Prevention services

14	AP should have Kensington lock slot.
15	AP should be UL 2043 rated.

1g. Outdoor Wireless LAN Access Points (10 Nos.)

Sr. No.	Specifications
	Description
1	Dual Radio Access Point having minimum 3X3 MIMO with three spatial streams or delivering 1.3 Gbps in the 5-GHz band and 600 Mbps in the 2.4-GHz band
2	Access Point should be 802.11ac ready from day one
3	AP should have 2 x10/100/1000 Mbps GE LAN port.
4	802.11 a/b/g/n/ac functionality certified by the Wi-Fi alliance.
5	Access Point can have integrated or external Antenna.
6	The Max transit power of the AP + Antenna should be as per industry norms for outdoor Access Points.
7	Should support Minimum 8 BSSID per AP radio.
8	Access point should support 802.11ac beam forming for 802.11ac.
9	The access point should be capable of performing security scanning and serving clients on the same radio. It should be also capable of performing spectrum analysis and security scanning using same radio.
10	Access point should support 802.3af/at POE standard.
11	Access point should have option of external power adaptor as well.
12	Must operate as a sensor for wireless IPS .
13	AP model proposed must be able to be both a client-serving AP and a monitor-only AP for Intrusion Prevention services
14	Operating Temperature: -40° C to +65° C

1h. Network Management Software (Qty1 No)

Sr. No	Specifications
1	**Features**
1.1	The proposed Network Management Software shall be a standalone, comprehensive management platform that delivers integrated, modular management capabilities across fault, configuration, accounting, performance, and security needs
1.2	The software shall be designed on a service-oriented architecture (SOA) using a business application flow model and capable of including additional modules to the base platform to provide deeper functionality
1.3	The software shall be compatible with Microsoft Windows and Linux operating systems
1.4	The software shall come with an initial license for 100 managed devices. Additional node licenses shall be available to extend the node limit
1.5	The software shall enable centralized management of proposed network elements with a variety of automated tasks, including discovery, categorization, baseline configurations, software images, configuration comparison tools, version tracking, change alerts, and more.
1.6	Shall have rich Resource Management like Discovery, full inventory, L2/L3 topology etc
1.7	Shall provide performance management including CPU utilization, Memory utilization, Bandwidth utilization, TopN statistics, threshold-based alarming etc
1.8	Shall support centralized VLAN Management to view current VLAN configuration, VLAN topology, bulk VLAN deployment etc.
1.9	Shall have integrated ACL Management to simplify definition and deployment of ACLs and perform ACL rule optimization
1.10	Shall support comprehensive configuration Management like Bulk configuration, scheduled backup and restore, base lining and notification of changes etc
1.11	Shall have fault management features like in-depth correlation and analysis of alarms
1.12	Shall provide flexible reporting capabilities including pre-defined and custom reports with scheduled and flexible delivery options

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1.13	Centralized and Distributed deployment capability
1.14	The software shall have modular architecture supporting other software plug-ins to enrich the network's management capabilities.
1.15	Shall include Wireless Network Management component for minimum 500 Access Points from Day 1
1.16	Shall include Network Traffic Analysis (using sflow / Netflow) component for minimum 10 Network devices from Day 1
2	**Configuration Required**
2.1	The software shall be proposed with OEM-recommended hardware/OS/DB etc
2.2	The NMS shall be integrated / Compatible with networking products proposed in this tender viz., switches, Routers and networking equipment's

1i. UTM (with futures of Firewall, PROXY, DNS, IDS , DHCP and IPS Gateway antivirus antivirus-spam, Anti spyware, web content filtering and Application filtering) - (3 Nos)

Sr. No	Specifications
1	**Platform**
1.1	The proposed appliance's underlying OS must be embedded OS with hardening Unix/Linux.
1.2	The proposed appliance shall be capable of supporting at least 10 Gbps Firewall throughputs and not less than 2Gbps of Inspected throughput.
1.3	The proposed appliance shall support VPN site and client to site.
1.4	The proposed appliance shall support Eight 1 Gb/s SFP copper / fiber ports and Four 10 Gb/s SFP+ copper / fiber ports
1.5	The proposed appliance shall support dedicated High Availability port or port for High Availability.
1.6	The proposed appliance shall support parallel processing.
1.7	The latency of the proposed appliance shall be under 600 microseconds in all conditions.
1.8	The proposed appliance shall support up to 12,00,000 concurrent sessions and up to 1,20,000 connections per second or shall have Minimum 10,00,000 concurrent session and up to 40,000 connections /second.
1.9	The proposed appliance shall support flash or SSD on-box storage at least 32 GB
2	**High Availability**
2.1	The proposed appliance solution shall support the link down synchronization in segment mode or Equivalent.
2.2	The proposed appliance shall support full redundancy cluster solution
2.3	The proposed appliance shall support full High Availability statefull mechanism through the dedicated High Availability ports or port for High Availability. It shall not be done by monitoring ports
2.4	The proposed appliance shall support an Out-of-Band Ethernet management port.
2.5	The proposed appliance shall be able to operate without requiring any IP address (except the management port) in bridged mode
3	**Security & Protection**
3.1	The proposed appliance shall support out of the box firewall rule with deny all.
3.2	Must support the following action set - Block, Block + Notify, Block + Notify + Trace, Permit, Permit + Notify, Permit + Notify + Trace, Rate Limit, Quarantine, Syslog Notify and Email Notify-- Alternately, Must support the following action set - Block, Block + Notify, Block + Notify + Trace, Permit, Permit + Notify, Permit + Notify + Trace, Quarantine, Syslog Notify and Email Notify
3.3	The proposed appliance must embedded with complete IPS function
3.4	The proposed appliance shall support firewall rule and IPS inspection profile combination
3.5	The proposed appliance shall support Reputation service to detect BotNet, Zero-Days, Bad Hosts, Bad Domains, and bad IP addresses
3.6	The proposed appliance shall support user Reputation feature

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3.7	The proposed appliance shall detect and block attack obfuscation techniques such as hex encoding, Unicode encoding and case sensitivity
3.8	The proposed appliance shall detect and block spyware applications
3.9	The proposed appliance shall detect and block Phishing and Identity Theft Attacks
3.10	The proposed appliance shall support user-based policy by Active Directory, LDAP, Radius integration
3.11	The proposed appliance shall support routing OSPF, RIP, BGP, and Multicast Dynamic Routing
4	**Management**
4.1	The proposed appliance shall support an embedded element manager for local management. The local management should be a web GUI interface that provides administration, configuration and reporting capabilities. Alternately, The proposed appliance shall support an embedded element manager for local management. The local management should be a web GUI interface that provides administration, configuration and Monitoring capabilities. If local NGFW functionality require separate management server, vendor can provide the same.
4.2	The proposed appliance shall support (SSH/)SSH2 and HTTPS as a means of local management.
4.3	The local management should allow the administrator to update of IPS signature filter in real time
4.4	Additionally, the proposed appliance solution shall be offered with a centralized management server for enterprise management of the appliance
4.5	The centralized management server shall be an appliance or virtual appliance based on a harden OS shipped by-default from factory.
4.6	The centralized management server shall be able to manage at least 25 devices.
4.7	The centralized management server shall allow distribution of latest firewall policy, IPS policy and signature update manually or automatically to the various devices Appliance should support Virtual Firewall functionality .
5	IPS Signatures shall be provisioned for Two Years from Day 1

1j. WAN and Internet Routers (2 Nos)

Sr. No	Specifications
1	**Architecture**
1.1	Router shall be based on multi-core processors providing robust routing and security
1.2	The router shall have two 10/100/1000 Mbps ports (RJ-45) and two Gigabit SFP Ports
1.3	The router shall have two 10-Gigabit **SFP / SFP+** ports for 10G Scalability. Shall be populated with 2 x 10G SR Transceivers from Day 1
1.4	The router shall have modular slots supporting LAN/WAN interface cards - Ethernet, V.35, E1, E3, STM1 etc
1.5	The router shall have Internal redundant power supply
1.6	The router shall be 19" Rack Mountable (any hardware required shall be offered)
2	**Performance**
2.1	The router forwarding performance shall be Minimum 9 MPPS.
2.2	The router shall have Hardware-based encryption acceleration
2.3	The router shall have an encryption performance of 4 Gbps
3	**Features (Any licenses required shall be included)**
3.1	The router shall support the following IP Routing Protocols (IPv4) - Static Routing, RIP, OSPF, BGP, and IS-IS
3.2	The router shall support the following IP Routing Protocols (IPv6) - Static Routing, RIPng, OSPFv3, BGP+, and IS-ISv6
3.3	The router shall support Multicast routing protocols for IPv4 and IPv6 - PIM-DM, PIM-SM etc
3.4	The router shall support Policy-based routing
3.5	The router shall have QoS features including Traffic policing, shaping, Congestion management, congestion avoidance etc

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3.6	The router shall have embedded security capabilities like Firewall, IPSec, ACL Filtering etc
3.7	The router shall provide IPv6 transition mechanisms like NAT-PT, Tunneling etc
3.8	Dynamic VPN Capability for ease of VPN deployment
4	**Management**
4.1	SNMP V1/V2c/V3, RMON/sFlow
4.2	RADIUS/TACACS+ for management security
4.3	Integrated console port (CLI) provided with console cable

1k. AAA, NAC and BYOD Appliance (2 Nos)

Sl no	Specifications
1	**Platform**
1.1	Should support approach that combines AAA, NAC, BYOD and Guest Access by incorporating identity, health, physical/device information, and conditional elements into one set of policies.
1.2	Must have ability to scale to up to 5000 devices per appliance and in cluster up to 1 Lakh devices.
1.3	Solution must be Agnostic to existing wired, wireless and VPN network in place today.
1.4	Shell protected by CLI providing configuration for base appliance settings.
1.5	Appliance must provide disk or file encryption or equivalent.
1.6	Ability to mix and match virtual and hardware appliances in one deployment.
2	**Functionality**
2.1	Web-based, interface that includes several productivity tools such as a configuration wizard and preconfigured policy templates.
2.2 2.3	Support any type of networking equipment (wired, wireless, VPN) and a variety of authentication methods (802.1X, MAC auth, Web auth).
2.4	Ability to take advantage of a phased implementation approach by starting with one element of access management (role based) and later incorporating added security measures (endpoint health).
2.5	Must incorporate a complete set of tools for reporting, analysis, and troubleshooting. Data from access transactions can be organized by customizable data elements and used to generate graphs, tables, and reports. Must correlate and organize user, authentication, and device information together.
2.6	Solution for fully integrated support for Microsoft NAP allowing health and posture checks on Windows endpoints without the need to install an agent
2.7	AAA server should have device profiling functionality for 5000 concurrent devices from day 1 to enforce context aware policies.
2.8	It must provide functionality like Android should get different access and Iphone will get different access.
2.9	If any additional license would require to provide profiling functionality, it shall be perpetual. or Subscription for three years
2.10	AAA server must support both functionality RADIUS server for client device authentication and TACACS+ for network device authentication and logging from day 1.Overlay component can be added to achieve both functionality.
2.11	The solution Must be an easy-to-deploy hardware platform that utilizes identity based policies to secure network access and includes an integrated set of capabilities bundled under one policy platform:
2.12	Built-in guest management and device/user onboarding
2.13	Web based management interface with Dashboard
2.14	Reporting and analysis with custom data filters
2.15	Data repository for user, device, transaction information
2.16	Rich policies using identity, device, health, or conditional elements
2.17	Must support flexible licensing model based on required functionality (i.e. Profile, Onboard, Posture, Guest Access).

2.18	Correlation of user, device, and authentication information for easier troubleshooting, tracking etc.
2.19	Should support multiple methods for device identification and profiling such as:
2.20	Integrated, network based, device profiler utilizing collection via SNMP, DHCP, HTTP, AD, ActiveSync
2.21	Policy creation tools:
2.22	• Pre-configured templates
2.22	• Wizard based interface
2.23	• LDAP browser for quick look-up of AD attributes
2.24	Policy simulation engine for testing policy integrity
2.25	Policy model should support incorporation of several contextual elements including identity, endpoint health, device, authentication method & types, and conditions such as location, time, day, etc.
2.26	Support the following enforcement methods:
2.31	VLAN steering via RADIUS IETF attributes and VSAs
2.33	Access control lists – both statically defined filter-ID based enforcement, as well as dynamically downloaded ACLs.
2.34	Roles Based Access or any other vendor-specific RADIUS attribute supported by the network device.
2.35	Bandwidth Consumption based Access [Allocate 1GB of data upload download quota for 30days and the quota should reset to zero after 30 days automatically.
2.36	Location Based Access [If the user is connecting from common area provide him limited access and the same user is connecting from hostel or library provide him full access]
2.37	Time Based Access [Specify Time for Access in week days and weekends]
2.38	Must be able to join multiple Active Directory domains to facilitate 802.1x PEAP authentication.
2.39	Must be able to issue certificates using an inbuilt Certificate Authority
2.40	Must support complex PKI deployment where TLS authentication requires validating client certificate from multiple CA trust chain. Must also support AAA server certificate being signed by external CA whilst validating internal PKI signed client certificates.
2.41	Validate Antivirus Product, version, engine # and dat file are up to date with User Notification and Auto-Remediation.
2.42	Validate Windows Patches compliance through SCCM with Auto-Remediation
2.43	Validate Firewall Product version, User Notification and Auto-Remediation.
2.44	Validate List of Allowed Applications running on the Machine [Mandatory and Optional] with User Notification and Auto-Remediation.
2.45	Validate Network Connection - Allow only one active Network Connection [Wired or Wireless] and disable if the user tries to connect via Data Card-.
2.46	Should support both Agent-less and Agent based Health Check.
2.47	Should support multiple operating systems - Windows Client Operating System, Windows Server Operating System, MAC client operating system and Linux.
3	**Reliability / Performance**
3.1	Must be able to integrate with leading MDM vendors to fetch the attributes, for eg. If the device is rooted Access should be denied.
3.3	Appliances have ability to be clustered in any combination via local and remote network connections providing unlimited scale, redundancy, and access load balancing.
3.4	Failure of master node should not impact the ability for backup appliances to continue servicing authentication traffic.
3.5	Must support several deployment modes including centralized, distributed, or mixed.

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B. Technical Requirement (Passive)

Network Description (Passive)

SL No	Description of Networking Component (Passive items)	Quantity	UOM
2	**Networking – Passive** **(Note: Single OEM should be there for Copper & Fiber component)**		
1	Indoor Optical Fiber Cable – MMF 12 core	2500	Meter
2	Outdoor Optical Fiber Cable – SMF 12 core	3000	Meter
3	Cat-6 Cable (305 Meters Box)	200	Box
4.1	CAT -6 I/O (1 X Data)	2250	Nos
4.2	Faceplate (Single)	2250	Nos
5.1	CAT -6 I/O (1 x Voice)	770	Nos
5.2	Faceplate (Single for Voice)	770	Nos
6.1	CAT-6 Patch Cord, UTP, 1 Meters (For Data)	2250	Nos
6.2	CAT-6 Patch Cord for Rj45 to MDF Panel (for Voice)	750	Nos
6.3	CAT-6 Patch Cord, UTP, 2 Meters (for Data)	2250	Nos
7.1	CAT -6 patch panel, unloaded,24-port, 1U	90	Nos
7.2	24-port patch panel (with modules) For Data and Voice	90	Nos
8.1	Fiber LIU, 24 –fiber, Fully-loaded Single Mode	25	Nos
8.2	Fiber LIU, 24 –fiber, Fully-loaded Multi Mode	25	Nos
9.1	Fiber Patch Cord, LC-LC SM, Duplex 2 meter (100)	100	Nos
9.2	Fiber Patch Cord, LC-LC SM, Duplex 3 meter(100)	100	Nos
10.1	Fiber Patch Cord, LC-LC MMF, Duplex 2 meter (100)	100	Nos
10.2	Fiber Patch Cord, LC-LC MMF, Duplex 3 meter (100)	100	Nos
11	Multi-pair Riser Cable, UTP, 50 pair (voice)	5500	Meter
12	Back mount Frame, 100 -pair, MDF (Full Loaded)	42	Nos
13.1	Fiber LIU, 48 –fiber, Fully-loaded Single Mode,	12	Nos
13.2	Fiber LIU, 48 –fiber, Fully-loaded Multi Mode,	12	Nos
14	Jumper Wire,100 Meters (BOX)	5	Nos
15	Rack, 42U , (800 width x 1200mm Depth) Server Rack (black color) with perforated front door & rear door, left and right solid removable side panels, confirming to international standards and designed for vendor neutral solutions for servers, networking, communication and storage devices. Rack PDU should be SNMP enabled metered with zero U mounting from the OEM of UPS, current drawn 32A, Output Voltage 230V with minimum 16 output connections on per Rack basis. Environment monitoring unit should Monitor temperature and humidity temperature and Humidity monitoring probes shall have SNMP capability (Get / Set) and made available on TCP/IP in each rack. Adjustable power cable troughs and data partitions fit seamlessly into the roof of the server / Network racks to distribution power & networks cables or the bidder shall provide ceiling suspended network & power cable trays	03	No's
16	Rack, 15U, Minimum 600 (W) x 500 (D), wall mount with all required accessories	30	Nos

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17	Supply & Services Velcro Tie Roll, 20 meters(roll)	200	Nos
18	Supply Mounting Hardware packet (packet of 20)	50	Nos
19	Horizontal cable manager- 1U	100	Nos
20	PVC pipe, 25mm	4000	Meter
21	PVC pipe , 32 mm	3000	Meter
22	32 x 12 MM PVC Casing – Capping	5000	Meter
23	Supply of OFC Router Marker (for each 10 Meters on marker)	200	Nos
24	Supply of 50 MM Class B GI Pipe	2000	Meter
25	Supply of 40 MM HDPE Pipe	4000	Meter

Installation of LAN Description

SL No	Item Description	Quantity	UOM
1	Mounting & Installation of Campus Core Switches	2	Nos
2	Mounting & Installation 'of Distribution/Aggregation Switches	6	Nos
3	Mounting & Installation of 48-Port PoE User Access Switches	30	Nos
4	Mounting & Installation of 24-Port PoE User Access Switches	10	Nos
5	Mounting & Installation of Wireless LAN Controller	2	Nos
6	Mounting & Installation of Indoor Wireless LAN Access Points	200	Nos
7	Mounting & Installation of Outdoor Wireless LAN Access Points	10	Nos
8	Mounting & Installation of Network Management Software	1	Nos
9	Mounting & Installation of UTM Firewall and Intrusion Prevention System	3	Nos
10	Mounting & Installation of Gateway Routers	2	Nos
11	Mounting & Installation of AAA, NAC and BYOD Solution	2	Nos
1	Laying of Indoor Optical Fiber Cable – MMF 12 core	2500	Meter
2	Laying of Optical Fiber Cable – SMF 12 core	3000	Meter
3	Laying of Cat-6 Cable (305 Meters Box)	200	Box
4.1	Installation of CAT -6 I/O Box (1 X Data)	2250	Nos
4.2	Installation of Faceplate (Single)	2250	Nos
5.1	Installation of CAT -6 I/O (1 x Voice)	770	Nos
5.2	Installation of Faceplate (Single for Voice)	770	Nos
6.1	Installation of CAT-6 Patch Cord, UTP, 1 Meters (For Data)	2250	Nos
6.2	Installation of CAT-6 Patch Cord for Rj45 to MDF Panel (for Voice)	750	Nos
6.3	Installation of CAT-6 Patch Cord, UTP, 2 Meters (for Data)	2250	Nos
7.1	Installation of CAT -6 patch panel, unloaded,24-port, 1U	90	Nos
7.2	Installation of 24-port patch panel (with modules) For Data and Voice	90	Nos
8.1	Installation of Fiber LIU, 24 –fiber, Fully-loaded Single Mode	25	Nos
8.2	Installation of Fiber LIU, 24 –fiber, Fully-loaded Multi Mode	25	Nos
9.1	Installation of Fiber Patch Cord, LC-LC SM, Duplex 2 meter (100)	100	Nos

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9.2	Installation of Fiber Patch Cord, LC-LC SM, Duplex 3 meter(100)	100	Nos
10.1	Installation of Fiber Patch Cord, LC-LC MMF, Duplex 2 meter (100)	100	Nos
10.2	Installation of Fiber Patch Cord, LC-LC MMF, Duplex 3 meter (100)	100	Nos
11	Installation of Multi-pair Riser Cable, UTP, 50 pair (voice)	5500	Meter
12	Installation of Back mount Frame, 100 -pair, MDF (Full Loaded)	42	Nos
13.1	Installation of Fiber LIU, 48 –fiber, Fully-loaded Single Mode,	12	Nos
13.2	Installation of Fiber LIU, 48 –fiber, Fully-loaded Multi Mode,	12	Nos
14	Installation of Jumper Wire,100 Meters (BOX)	5	Nos
15	Fixing & Installation of 42U Rack & Other accessories as per Specifications	3	Nos
16	Fixing & Installation of Rack, 15U, Minimum 600 (W) x 500 (D), wall mount with all required accessories	30	Nos
17	Installation of Velcro Tie Roll, 20 meters(roll)	200	Nos
18	Supply Mounting Hardware packet (packet of 20)	50	Nos
19	Installation of Horizontal cable manager- 1U	100	Nos
20	Laying & Installation of PVC pipe, 25mm	4000	Meter
21	Laying & Installation of PVC pipe , 32 mm	3000	Meter
22	Laying & Installation of 32 x 12 MM PVC Casing – Capping	5000	Meter
23	Installation of OFC Router Marker (for each 10 Meters on marker)	200	Nos
24	Laying & Installation of 50 MM Class B GI Pipe	2000	Meter
25	Laying & Installation of 40 MM HDPE Pipe	4000	Meter
26	Digging of soft soil	3500	Meter
27	Digging of Hard soil	800	Meter
28	Documentation, certification & Project Management Charges	1	Lot

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SECTION V - COMMERCIAL-1
PRICE SCHEDULE

SL No	Description of Networking Component (Active Items)	Qty	UOM	Rate (INR)	Amount (INR)
		(X)		(A)	(Y=C*X)
	Supply of Passive Item Description				
1	**Networking – Active**				
1a	Supply of Campus Core Switches	2	Nos		
1b	Supplyof Distribution/Aggregation Switches	6	Nos		
1c	Supply of 48-Port PoE User Access Switches	30	Nos		
1d	Supply of 24-Port PoE User Access Switches	10	Nos		
1e	Supply of Wireless LAN Controller	2	Nos		
1f	Supply of Indoor Wireless LAN Access Points	200	Nos		
1g	Supply of Outdoor Wireless LAN Access Points	10	Nos		
1h	Supply of Network Management Software	1	Nos		
1i	Supply of UTM Firewall and Intrusion Prevention System	3	Nos		
1j	Supply of Gateway Routers	2	Nos		
1k	Supply of AAA, NAC and BYOD Solution	2	Nos		
	Supply of Passive Item Description				
SL No	**Description of Networking Component (Passive items)**	**Quantity**	**UOM**		
2	**Networking – Passive (Note: Single OEM should be there for Copper & Fiber component)**				
1	Indoor Optical Fiber Cable – MMF 12 core	2500	Meter		
2	Outdoor Optical Fiber Cable – SMF 12 core	3000	Meter		
3	Cat-6 Cable (305 Meters Box)	200	Box		
4.1	CAT -6 I/O (1 X Data)	2250	Nos		
4.2	Faceplate (Single)	2250	Nos		
5.1	CAT -6 I/O (1 x Voice)	770	Nos		
5.2	Faceplate (Single for Voice)	770	Nos		

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6.1	CAT-6 Patch Cord, UTP, 1 Meters (For Data)	2250	Nos		
6.2	CAT-6 Patch Cord for Rj45 to MDF Panel (for Voice)	750	Nos		
6.3	CAT-6 Patch Cord, UTP, 2 Meters (for Data)	2250	Nos		
7.1	CAT -6 patch panel, unloaded,24-port, 1U	90	Nos		
7.2	24-port patch panel (with modules) For Data and Voice	90	Nos		
8.1	Fiber LIU, 24 –fiber, Fully-loaded Single Mode	25	Nos		
8.2	Fiber LIU, 24 –fiber, Fully-loaded Multi Mode	25	Nos		
9.1	Fiber Patch Cord, LC-LC SM, Duplex 2 meter (100)	100	Nos		
9.2	Fiber Patch Cord, LC-LC SM, Duplex 3 meter(100)	100	Nos		
10.1	Fiber Patch Cord, LC-LC MMF, Duplex 2 meter (100)	100	Nos		
10.2	Fiber Patch Cord, LC-LC MMF, Duplex 3 meter (100)	100	Nos		
11	Multi-pair Riser Cable, UTP, 50 pair (voice)	5500	Meter		
12	Back mount Frame, 100 -pair, MDF (Full Loaded)	42	Nos		
13.1	Fiber LIU, 48 –fiber, Fully-loaded Single Mode,	12	Nos		
13.2	Fiber LIU, 48 –fiber, Fully-loaded Multi Mode,	12	Nos		
14	Jumper Wire,100 Meters (BOX)	5	Nos		
15	Rack, 42U , (800 width x 1200mm Depth) Server Rack (black color) with perforated front door & rear door, left and right solid removable side panels, confirming to international standards and designed for vendor neutral solutions for servers, networking, communication and storage devices.	3	nos		
	Rack PDU should be SNMP enabled metered with zero U mounting from the OEM of UPS, current drawn 32A, Output Voltage 230V with minimum 16 output connections on per Rack basis				
	Environment monitoring unit should Monitor temperature and humidity temperature and Humidity monitoring probes shall have SNMP capability (Get / Set) and made available on TCP/IP in each rack.				
	Adjustable power cable				

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	troughs and data partitions fit seamlessly into the roof of the server / Network racks to distribution power & networks cables or the bidder shall provide ceiling suspended network & power cable trays				
16	Rack, 15U, Minimum 600 (W) x 500 (D), wall mount with all required accessories	30	Nos		
17	Supply & Services Velcro Tie Roll, 20 meters(roll)	200	Nos		
18	Supply Mounting Hardware packet (packet of 20)	50	Nos		
19	Horizontal cable manager- 1U	100	Nos		
20	PVC pipe, 25mm	4000	Meter		
21	PVC pipe , 32 mm	3000	Meter		
22	32 x 12 MM PVC Casing – Capping	5000	Meter		
23	Supply of OFC Router Marker (for each 10 Meters on marker)	200	Nos		
24	Supply of 50 MM Class B GI Pipe	2000	Meter		
25	Supply of 40 MM HDPE Pipe	4000	Meter		
Installation of LAN Description					
SL No	Item Description	Quantity	UOM		
1	Mounting & Installation of Campus Core Switches	2	Nos		
2	Mounting & Installation 'of Distribution / Aggregation Switches	6	Nos		
3	Mounting & Installation of 48-Port PoE User Access Switches	30	Nos		
4	Mounting & Installation of 24-Port PoE User Access Switches	10	Nos		
5	Mounting & Installation of Wireless LAN Controller	2	Nos		
6	Mounting & Installation of Indoor Wireless LAN Access Points	200	Nos		
7	Mounting & Installation of Outdoor Wireless LAN Access Points	**10**	Nos		
8	Mounting & Installation of Network Management Software	1	Nos		
9	Mounting & Installation of UTM Firewall and Intrusion Prevention System	3	Nos		
10	Mounting & Installation of Gateway Routers	2	Nos		

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11	Mounting & Installation of AAA, NAC and BYOD Solution	2	Nos		
1	Laying of Indoor Optical Fiber Cable – MMF 12 core	2500	Meter		
2	Laying of Optical Fiber Cable – SMF 12 core	3000	Meter		
3	Laying of Cat-6 Cable (305 Meters Box)	200	Box		
4.1	Installation of CAT -6 I/O Box (1 X Data)	2250	Nos		
4.2	Installation of Faceplate (Single)	2250	Nos		
5.1	Installation of CAT -6 I/O (1 x Voice)	770	Nos		
5.2	Installation of Faceplate (Single for Voice)	770	Nos		
6.1	Installation of CAT-6 Patch Cord, UTP, 1 Meters (For Data)	2250	Nos		
6.2	Installation of CAT-6 Patch Cord for Rj45 to MDF Panel (for Voice)	750	Nos		
6.3	Installation of CAT-6 Patch Cord, UTP, 2 Meters (for Data)	2250	Nos		
7.1	Installation of CAT -6 patch panel, unloaded,24-port, 1U	90	Nos		
7.2	Installation of 24-port patch panel (with modules) For Data and Voice	90	Nos		
8.1	Installation of Fiber LIU, 24 – fiber, Fully-loaded Single Mode	25	Nos		
8.2	Installation of Fiber LIU, 24 – fiber, Fully-loaded Multi Mode	25	Nos		
9.1	Installation of Fiber Patch Cord, LC-LC SM, Duplex 2 meter (100)	100	Nos		
9.2	Installation of Fiber Patch Cord, LC-LC SM, Duplex 3 meter(100)	100	Nos		
10.1	Installation of Fiber Patch Cord, LC-LC MMF, Duplex 2 meter (100)	100	Nos		
10.2	Installation of Fiber Patch Cord, LC-LC MMF, Duplex 3 meter (100)	100	Nos		
11	Installation of Multi-pair Riser Cable, UTP, 50 pair (voice)	5500	Meter		
12	Installation of Back mount Frame, 100 - pair, MDF (Full Loaded)	42	Nos		
13.1	Installation of Fiber LIU, 48 – fiber, Fully-loaded Single Mode,	12	Nos		
13.2	Installation of Fiber LIU, 48 – fiber, Fully-loaded Multi Mode,	12	Nos		
14	Installation of Jumper Wire,100 Meters (BOX)	5	Nos		
15	Fixing & Installation of 42U Rack & Other accessories as per Specifications	3	Nos		

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16	Fixing & Installation of Rack, 15U, Minimum 600 (W) x 500 (D), wall mount with all required accessories	30	Nos		
17	Installation of Velcro Tie Roll, 20 meters(roll)	200	Nos		
18	Supply Mounting Hardware packet (packet of 20)	50	Nos		
19	Installation of Horizontal cable manager- 1U	100	Nos		
20	Laying & Installation of PVC pipe, 25mm	4000	Meter		
21	Laying & Installation of PVC pipe , 32 mm	3000	Meter		
22	Laying & Installation of 32 x 12 MM PVC Casing – Capping	5000	Meter		
23	Installation of OFC Router Marker (for each 10 Meters on marker)	200	Nos		
24	Laying & Installation of 50 MM Class B GI Pipe	2000	Meter		
25	Laying & Installation of 40 MM HDPE Pipe	4000	Meter		
26	Digging of soft soil	3500	Meter		
27	Digging of Hard soil	800	Meter		
28	Documentation, certification & Project Management Charges	1	Lot		
		Sub Total (In INR)			
		Discount (in INR)			
		Grand Total (in INR)			

Note

1. Do not quote optional items against the requirement mentioned in this tender.
2. The price quoted above should not be inclusive of any taxes/levies. Taxes/levies if any must be mentioned separately along with the price bid. IIIT-Bangalore shall reimburse for these taxes/levies based on submission of relevant documents including registration certificates at each payment stage.
3. Discount (if any) to be offered should be mentioned against in the respective cell provided above. In case it is mentioned elsewhere it will not be considered for the purpose of price comparison.
4. If there is a discrepancy between the unit price and total price THE UNIT PRICE shall prevail.
5. The bidder must quote for all the items mentioned under Section IV – Schedule of Requirement. The lowest price criteria shall be applied on the total composite amount of all items taken together.

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2. PERFORMA OF BANK GUARANTEE TOWARDS EMD
(on non-judicial paper of appropriate value)

Bank Guarantee No. --------------------------------------

Dated:

To
The Registrar,
IIIT Bangalore

Dear Sir(s),

Whereas the IIIT Bangalore having its office at Bangalore (hereinafter called the IIITB) which expression shall, unless repugnant to the context or the meaning thereof, include all its successors, administrators, executors and assignees has on behalf of the President of India invited tender No. -------------------------------- and M/s ------------ --- having Registered/head office at ---------------------------- ------------------------------------- -------------------- (Hereinafter called the "bidder" which expression shall, unless repugnant to the context or the meaning thereof, mean and include alt its successors, administrators executors and assignees) have submitted a Proposal Reference No. ------------------------- and bidder having agree to furnish as a conditions precedent for participation in tender as unconditional and irrevocable bank guarantee of Rs----------------------(Rupees --- Only) for the due performance of bidder's obligations as contained in the tender document specially the conditions that (a) bidder shall keep his Proposal open for a period of day i.e. from ------------------------ to --------------------- or any extension thereof, and shall not withdraw or modify it in a manner not acceptable to the IIITB (b) the bidder will execute the contract, if awarded, and shall furnish performance guarantee in the format prescribed by the IIITB within the required time. The bidder has absolutely and unconditionally accepted these conditions. The IIITB and the bidder have agreed that Proposal submitted by the bidder is an offer made on the condition that the Proposal, if submitted would be kept open in its original form without variation or modification in a manner not acceptable to the IIITB for a period of --- --------days i.e. from -------------- to --------------- or any, extension thereof and that submission of the Proposal itself shall be regarded as an unconditional and absolute acceptance of the conditions, contained in the tender document. They have further agreed that the contract consisting of tender document and submission of the Proposal as the ACCEPTANCE shall be a separate contract distinct from the contract which will come into existence when the Proposal is finally accepted by the IIITB. The consideration for this separate initial contract preceding the main contract is that the IIITB is not agreeable to sell the tender documents to the bidder and to consider the Proposal to be made except on the condition that the Proposal shall be kept open for the period indicated above and the bidder desires to submit a Proposal on this condition after entering into this separate initial contract with the IIITB promises to consider the Proposal on this condition and bidder agrees to keep this proposal open for the required period. These reciprocal promises form the CONSIDERATION for this separate initial contract between the parties.

2. Therefore, we -- registered (indicate the name of Bank) under the laws of --having head/registered office at (hereinafter referred to as the "Bank") which expression shall, unless repugnant to the context or meaning thereof, include all its successors, administrators and executors hereby issue irrevocable and unconditional bank guarantee and undertake to pay

immediately on first demand in writing Rupees all money to the extent of Rs------------------- (Rupees------------------- ----------------------- only) at any time immediately on such demand without any demur, reservations, recourse, contest or protest and/ or without any reference to the bidder and any such demand made by the IIITB on the bank shall be conclusive and binding notwithstanding any difference between the IIITB and the bidder or any dispute pending before any court/arbitrator or any other matter whatsoever. We also agree to give that Guarantee herein the IIITB in writing. This guarantee shall not be determined/discharged/affected by the liquidation, winding up, dissolution or insolvency of the bidder and will remain valid, binding and operative against the bank.

3. The bank also undertakes that the IIITB at the option shall be entitled to enforce this guarantee, against the Bank as a principal debtor, in the first instance, without proceeding against the bidder.

4. The bank further agree that as between the bank and the IIITB, purpose of the guarantee, any notice of the breach of the terms and conditions contained in the tender Documents as referred above given to the bank by the IIITB shall be conclusive and binding on Bank, without any proof, notwithstanding any other matter or difference or dispute whatsoever. We further agree that this guarantee shall not be *affected* by any change in our

constitution, in the constitution of the IIITB or that of the bidder. We also undertake not to revoke, in any case, this Guarantee during its currency.

5. The bank agree with the IIITB that the IIITB shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms of the tender or get extension of the validity period from time to time. We shall not be relieved from our liability by reason of any such variation or extension of the validity period or for any forbearance, act of omission and commission on the part of the IIITB or any indulgence shown by the IIITB to the said bidder or by any such matter or thing whatsoever which under the law relating to sureties, would, but for this provision, have the effect of so relieving us.

6. Notwithstanding anything contained here in above our liability under his Guarantee is limited to Rs. -------------- --------------- (Rupees --- only) in aggregate and it shall remain in full force upto -------------------------------(225 days from the date of bid opening) unless extended further from time to time, for such period as may be instructed in writing by M/s--- on whose behalf this guarantee has been given, in which case, it shall remain in full force upto the expiry of extended period. Any claim under this guarantee must be received by us before -------------------------------- (date of expiry of validity period) or before the expiry of extended period, if any. If no such claim is received by us within the said date/extended date, the rights of the IIITB under this guarantee will cease. However, if such a claim has been received by us within and upto the said date/extended date, all right of the IIITB under this guarantee shall be valid and shall not cease until we have satisfied that claim.

7. In case contract is awarded to the Bidder here in after referred to as "Contractor" the validity of this Bank Guarantee will stand automatically extended until the bidder furnished to the IIITB a bank guarantee for requisite amount towards performance guarantee for satisfactory performance of the contract. In case of failure to furnish performance bank Guarantee in the format prescribed by the IIITB by the required date the claim must be submitted to us within validity period or extended period, if any. If no such claim has been received by us within the said date /extended date, rights, of the IIITB under this guarantee will cease. However if such a claim has been received by us within the said date/extended date all rights of the IIITB under this guarantee shall be valid and shall not cease until we have satisfied that claim, In witness where of the Bank, through its authorized officer, has sent its hand & stamp on this --------------------day of at_____ of---------------------at------------------ - of--------------------------------------- (month & year).

Signature
(Full name in capital letters)
Designation with bank stamp

Witness No.1
Signature
(Full name and address in capital letters)

Witness No.2
Signature
(Full name and address in capital letters)

Attorney as per power of attorney
No --------------------------------
Date ------------------------------

3. PERFORMA OF PERFORMANCE BANK GUARANTEE

(on non-judicial paper of appropriate value)

Dated:
To,
The Registrar,
IIIT Bangalore

BANKS GUARANTEE NO:

Dear Sir(s),

In consideration of the IIIT Bangalore (hereinafter called "IIITB") having offered to accept the terms and conditions of the proposed agreement between …………..and …………….. (hereinafter called "the said contractor(s)" for the work …………………………. (hereinafter called "the said agreement"} having agreed to production of an irrevocable Bank Guarantee for Rs……….(Rupees…………..………only) as a security/guarantee from the contractor(s) for compliance of his obligations in accordance with the terms and conditions in the said agreement.1. We ………………………….………… (hereinafter referred to as the "Bank") hereby undertake to (indicate the name of the Bank) pay to the IIITB an amount not exceeding Rs….. (Rupees……………………………..only) on demand by the IIITB.

2. We ……………………….…………(indicate the name of the Bank) do hereby undertake to pay the amounts due and payable under this Guarantee without any demur, merely on a demand from the IIITB stating that the amount claimed is required to meet the recoveries due or likely to be due from the said contractor(s). Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this Guarantee. However, our liability under this Guarantee shall be restricted to an amount not exceeding Rs……………(Rupees……………………………only).

3. We, the said Bank, further undertake to pay to the IIITB any money so demanded notwithstanding any dispute or disputes raised by the contractor(s) in any suit or proceeding pending before any Court or Tribunal relating thereto, our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment thereunder, and the contractor(s) shall have no claim against us for making such payment.

4. We ……………………………………… (indicate the name of the Bank) further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement, and it shall continue to be enforceable till all the dues of the IIITB under or by virtue of the said agreement have been fully paid, and its claims satisfied or discharged, or till the representative of IIITB, on behalf of the Government, certifies that the terms and conditions of the said agreement have been fully and properly carried out by the said contractor(s), and accordingly discharges this guarantee.

5. We ……………………………………(indicate the name of the Bank) further agree with the IIITB that it shall have the fullest liberty without our consent, and without effecting in any manner our obligations hereunder, to vary any of the terms and conditions of the said agreement or to extend time of performance by the said contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by IIITB against the said contractor(s),and to forbear or enforce any of the terms and conditions relating to the said agreement, and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said contractor(s) or for any forbearance, act of omission on the part of the IIITB or any indulgence by the IIITB to the said contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. This Guarantee will not be discharged due to the change in the constitution of the Bank or the contractor(s).

7. We ………………………………..lastly undertake not to revoke this Guarantee except with (indicate the name of the Bank) the previous consent of the IIITB in writing.

8. This Guarantee shall be valid up to …………………unless extended on demand by the IIITB. Notwithstanding anything mentioned above, our liability against this Guarantee is restricted to Rs ……………….. (Rupees ………………………….only), and unless a claim in writing is lodged with us within six months of the date of expiry or extended date of expiry of this Guarantee all our liabilities under this Guarantee shall stand discharged. Dated the ………………day of…………………. For ……………………......................

Granted by the Bank
Yours faithfully….

Tender Document for Supply, Installation, Testing, Commissioning(SITC) and onsite support for networking components of MIIT Project, Mandalay, Myanmar

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4. MANUFACTURER AUTHORISATION FORMAT
(On manufacturer's letterhead)

Date:

To,
The Registrar,
IIIT Bangalore

Subject: Manufacturer authorisation towards tender no. _____ for Supply, Installation, Testing, Commissioning(SITC) and onsite support for networking components of MIIT Project, Mandalay, Myanmar.

Dear Sir,

We, M/s _____ *(Name of the manufacturer)* having registered office at _____ *(address of the manufacturer)* by virtue of being manufacturer for _____ *(Name of the product/s)*, hereby authorise M/s _____ *(Name of the bidder)* having their office at _____ *(Address of bidder)* to submit quote, negotiate, supply, install and provide after sales support for our range of products quoted by them to meet the above mentioned tender requirements.

M/s _____ *(Name of the manufacturer)* within the scope of requirement as per the tender mentioned above through its authorised partner M/s _____ *(Name of the bidder)* shall provide support & product warranty services for a minimum period of one year form the date of installation and commissioning.

The undersigned is authorised to issue such authorisation on behalf of M/s _____ *(Name of the manufacturer).*

For M/s _____ *(Name of the manufacturer)*

Signature & company seal
Name
Designation
Email
Mobile No.

5. Undertaking of Authenticity

Sub: Supply of IT Hardware/Software -- Desktops and Servers
Ref: 1. Your Purchase Order No. ------------dated-------.
             2. Our invoice no/Quotation no. -------dated--------.

With reference to the Desktops and Servers being supplied /quoted to you vide our invoice no/quotation no/order no. Cited above,----

We hereby undertake that all the components/parts/assembly/software used in the Desktops and Servers under the above like Hard disk, Monitors, Memory etc shall be original new components/parts/ assembly /software only, from respective OEMs of the products and that no refurbished/duplicate/ second hand components/parts/ assembly / software are being used or shall be used.

We also undertake that in respect of licensed operating system if asked for by you in the purchase order, the same shall be supplied along with the authorised license certificate (eg Product Keys on Certification of Authenticity in case of Microsoft Windows Operating System) and also that it shall be sourced from the authorised source (eg Authorised Microsoft Channel in case of Microsoft Operating System).

Should you require, we hereby undertake to produce the certificate from our OEM supplier in support of above undertaking at the time of delivery/installation. It will be our responsibility to produce such letters from our OEM supplier's at the time of delivery or within a reasonable time.

In case of default and we are unable to comply with above at the time of delivery or during installation, for the IT Hardware/Software already billed, we agree to take back the Desktops and Servers without demur, if already supplied and return the money if any paid to us by you in this regard.

We (system OEM name) also take full responsibility of both Parts & Service SLA as per the content even if there is any defect by our authorized Service Centre/ Reseller/SI etc.

Authorised Signatory

Name:

Designation

Place

Date