No. MoES/05/13/2019-IT
Government of India/भारतसरकार
Ministry of Earth Sciences/पृथ्वीववज्ञानमंत्रालय

Prithvi Bhawan ,
Lodi Road, New Delhi-3
Dated 29-10-2020

Subject: **Tender for supply, installation, testing and commissioning of Active and Passive network components for Local Area Networking in Ministry of Earth Sciences at Prithvi Bhawan, Lodhi Road, New Delhi.**

Online bids are hereby invited under Two-Bid System i.e. Technical Bid and Financial Bid for revamping of existing LAN infrastructure of the Ministry of Earth Sciences, New Delhi.

2. The bid will be accepted as E-tender only.

3. The tender document contains the following:

Annexure-I	Instructions for Online Bid Submission
Annexure-II	Form For Technical Bid
Annexure-III	Form For Financial Bid
Annexure-V	Check List for Technical Bid Evaluation:
Annexure-VI	LAN Site Survey Report(Room Wise)
Annexure-VII	Manufacturer Authorization Letter
Annexure-VIII	Bid Securing Declaration Format
Annexure-IX	Performance Security Bond Form
Annexure-X	Existing Active and Passive components.
Annexure-XI	Model Contract Agreement.

Naveen Shah
Director (G.A. Division)
Tel. 011 24669510

No. MoES/05/13/2019-IT Government of India/भारतसरकार Ministry of Earth Sciences/पृथ्वीववज्ञानमंत्रालय

Prithvi Bhawan,
Lodi Road, New Delhi-3
Dated 29-10- 2020

To,

All Bidders

[Tender Notice]

Subject: Tender for Integrated solution, supply, installation, testing and commissioning of Active and Passive network components for Local Area Networking for Ministry of Earth Sciences at Prithvi Bhawan, Lodhi Road, New Delhi.

4. **Scope of Work-** The Ministry of Earth Sciences is located in Prithvi Bhawan at Lodhi Road, New Delhi. The Prithvi Bhawan is a 5 story building with one basement. It is spread over an area of 23590 sqr. meters, out of which 2400 sqr. meters make its periphery.

   The ministry proposes to revamp/upgrade its Local Area Networking infrastructure as per the security guidelines of the Ministry of Home Affairs (MHA) and National Informatics Centre (NIC).

5. **REQUEST FOR PROPOSAL:**

   5.1 Integrated solution, supply, installation, testing and commissioning of Active and Passive network components for Local Area Networking along with 5 years Warranty for Active and Passive Components of the networking items.

   5.2 Ministry of Earth Science, intends to engage an agency/firm for supply, installation, testing, commissioning of Active and Passive Network Components for Ministry of Earth Sciences, Prithvi Bhawan, Lodhi Road, New Delhi.

   5.3. The objective of the assignment, broad scope of work, delivery schedule, payment conditions etc. for the aforesaid work is given below:

   5.4 This eTender (open) is for **Authorized Dealer/Distributor/System Integrator of the OEM of the offered product (Bidder to submit MAF issued by OEM)**. as per the format provided.

6. Authorized **Dealer/Distributor/System Integrator** are hereby invited to submit their proposals along-with design as well as complete technical specifications of the proposal for supply, installation, testing and commissioning of Active and Passive Network Components for Local Area Networking through e-tendering mode only, in the prescribed format. The proposals should be submitted online in the prescribed format. No change in formats and / or other mode of submission is permissible. After the said deadline, the e-tendering system shall not accept any other mode of submission

7. Ministry of Earth Sciences reserves its right to annul the entire process and/or reject any/ all proposals without assigning any reason and incurring any cost.
8. The project shall be a complete turnkey solution. The cost of the CAMC should be given separately in the Financial Bid with year wise breakup. The payment for CAMC will be released after completion preventive maintenance of every quarter after getting satisfactory service report/certificate from the IT Division/Gen. Admin. Section, MoES and other organizations of MoES. For this the bidder should submit 2 copies of original quarterly invoice along with service report.
9. The said **Authorized Dealer/Distributor/System Integrator** are hereby invited to submit their bids comprising Technical and Financial Bids through e-tendering mode on or before the bid due date. Bid shall be valid for 120 days w.e.f. bid due date. The bids should be submitted online only on the mentioned e-tender portal of MoES and in the prescribed formats. No change in the formats and / or other mode of bid submission is permissible.
10. For any clarification, the bidder may send their questions through Email. All queries shall be addressed to mail id: jk099@ifs@nic.in. Clarifications to bidder's queries along with Amendments / Corrigendum, if any, will be displayed on the official website of MoES https://moes.gov.in and e- tender portal **https://eprocure.gov.in/eprocure/app.**

11. **ELIGIBILITY AND PRE-QUALIFICATION CRITERIA:**

11.1 Field of Business:

This tender shall be quoted only by **Authorized Dealer/Distributor/System Integrator of the OEM of the offered product (Bidder to submit MAF issued by OEM)**. The Bids received from any other firm shall not be entertained.

11.2 Registration Status:

The bidder must be incorporated / registered in India under the Companies Act 1956 or any other relevant Act for at least 3 years (prior to the date of bid submission). Certificate of incorporation / registration must be submitted as documentary proof for the same. All AUTHORIZED DEALER/DISTRIBUTOR/SYSTEM INTEGRATOR should provide ink signed Manufacturer Authorization Form (MAF) for conformity of non-end of life product and spare parts support for next 5 years to be attached with the technical bid for supply, installation, testing and commissioning of Active and Passive network equipment for Local Area Networking.

11.3 The Applicant should not have been declared blacklisted or put on holiday for last three years by any Government Department or Public Sector undertaking or should not have been declared non performer by MoES for last three years on account of breach of any contractual provisions or otherwise declared ineligible by Ministry of Earth Science (MoES), Government of India for indulging in corrupt or fraudulent practices. *Self-declaration to this effect shall be submitted as part of the application. All necessary certificates/supporting documents shall also be enclosed along with the bid.*

11.4. The bidder should have registered office in India. Should have presence in India for minimum last 5 (Five) years. Statutory documents should be enclosed

11.5. The bidder should have own repair Centre in India.

11.6 The bidder should submit Manufacture Authorization Letter for Layer-2, Layer-3 Switches, WiFi Devices as per Annexure-III

11.7 Original Draft/DD for EMD should be submitted in favor of DDO, Ministry of Earth Sciences, New Delhi

11.8 Technical Bid Compliance sheet duly signed and stamped with Brand/Model and detailed specifications of the items. (Annexure-II)

11.9. Acceptance of Financial Bid Format (Annexure-III) duly signed and stamped.

11.10. Bid Securing Declaration Format should be attached as per the Annexure provided.

11.11. The experience of three works of similar nature of Rs. 80.00 Lakhs or two works of Rs. 1.20 Cr or one work of 1.60 Cr.

11.12. Financial Statement/Income Tax Statement of Last 3 Years should be attached by the Charted Accountant (CA).

11.13. Acceptance Letter – The bidder should sign each page of the tender document in order to accept/agree all the terms and conditions mentioned in the tender document. This will become part of the agreement to be signed by the Ministry with the successful bidder.

11.14 The OEM/Bidder should have min 5 spares depot in India, out of which one spares depot should be preferably in Delhi.

11.15 The OEM for LAN solution should have a Technical Assistance center with Toll Free No. in India.

11.16 The bidder should quote for back to back OEM services for 5 years support to ensure that the customer gets 24x7 access to the OEM TAC.

11.17 Solution proposed should be seamlessly integrated on single platform. All Active components of Local Area Networking should be from same OEM.

11.18 Active and Passive network equipment of OEM should have its direct presence in India. They should have their own registered Offices; Support-Service Centers across major locations in India. The proposed Active and Passive Components, the OEM must have its own R&D Centre and should also be compliant & certified to ISO; Six Sigma; CMMI quality standards in India.

12. PREPARATION & SUBMISSION OF PROPOSALS

11.1 Detailed tender may be downloaded from website of MoES / or e-tender portal **https://eprocure.gov.in/eprocure/app**, MoES. The bid shall be submitted online following the instruction appearing on the screen. A bidding manual containing the detail guidelines for e-tendering system is also available on e-tender portal.

11.2 The following documents shall be submitted in ORIGINAL to MoES before the prescribed date & time for submission of Bids.

13. **Bid Security-** Bid Security/EMD in the prescribed format. EMD is not required for eligible PSU. In place of a Bid security, they should sign a Bid securing declaration **(as per Annexure –VIII)** accepting that if they withdraw or modify their Bids during the period of validity, or if they are awarded the contract and they fail to sign the contract, or to submit a performance security before the deadline defined in the request for bid document, they may be suspended for a period of two years from being eligible to submit

Bids for contracts with any Ministry. The other bidders have to submit the EMD as per the clause 51.1.

13.1 Original Power of Attorney (Copy of Board Resolution and/ or Power of Attorney in the prescribed format / any other supporting document indicating that the person signing the bid has the required authority to sign on behalf of the bidder.) in favor of Authorized Signatory in the Format prescribed in this document.

13.2 Ink signed MAF of all OEMs proposed, names of OEM mentioned in the tender document.

14. **Bid Validity:** The bid should remain valid for a period of 120 days. The Bid Security is normally to remain valid for a period of 45 (Forty-Five) days beyond the final bid from the bid due date. MoES will make its best effort to complete the evaluation process and award the work within the bid validity period. Under exceptional circumstances, prior to expiry of the bid validity, MoES may request bidders to extend the bid validity for specified additional period beyond such request by MoES and reply / response from bidder shall be in writing. The bidder(s) not agreeing to such extension will be allowed to withdraw their bids without forfeiture of their bid security.

15. **Documents forming part of Technical Proposal to be uploaded on E-tender portal)**

i. Technical Proposal as mentioned in the document (Covering letter);
ii. Brief information about the Applicant/Firms;
iii. Document comprising full technical specifications compliance of the Active and Passive network equipment for Local Area Networking solution proposed / offered by the firms. Complete Technical Compliance Annexure – II on letter head of bidder along with data sheet/brochure of the products which is proposed.
iv. Any other document providing additional information, which the applicant wants to submit to substantiate its credentials
v. Copy of Certificate of Incorporation of Company;
vi. MoA and AoA of the Company / or other document showing object clause of the firm; and Signed copy of Integrity Pact in the prescribed format;
vii. Any other document providing additional information in respect of technical / financial strength as well as technical experience etc.

16. **Financial Proposal (In the prescribed format downloaded from E-Tender portal of Ministry of Earth Sciences.)**

Duly filled-in and digitally signed Financial Proposal submission form already downloaded from e-tender portal needs to be uploaded well before the prescribed deadline as per format and guidelines of e-portal.

a. Financial bid shall be submitted online on e-tender portal on the prescribed format which may be downloaded well before the bid due date from e-tender portal.

b. The bid should include all the charges payable in full compliance to the Scope of Work and other terms specified in the tender document. No additional payments whatsoever are envisaged.

c. The financial bid should include service tax/ GST (as applicable).

d. Applicant should note that Income tax payable by the Bidder is not reimbursable by MoES. TDS will be applicable on all payments made by MoES as per applicable law.

e. In case of any difference in figures and words, the amount mentioned in words will prevail.

f. It is mandatory to quote each line item of the financial bid; any line item left blank shall lead to the disqualification of the bid.

17. **Cost of Bidding:**

The Bidder shall be responsible for all the cost associated with the preparation and submission of their Bids including subsequent negotiation, visits to MoES, project site etc. MoES shall not be responsible in any way liable for such costs, regardless of the conduct or outcome of the bidding process.

18. **Language of the Bid**

The Bid and all communications in relation to or concerning the tender shall be in English language. No supporting document or printed literature shall be submitted with the Bid unless specifically asked for and in case any of the documents are in another language, it must be accompanied by an accurate translation of the relevant passages in English, in which case, for all purposes of interpretations of the Bid, the original documents attached with the bid or the information incorporated in the bid shall be final and binding.

19. **MODIFICATION /SUBSTITUTION/ WITHDRAWAL OF PROPOSAL:**

(i) The bidder may modify, sub statutory withdraw its proposal after submission prior to the due date. No proposal shall be modified, substituted or withdrawn by the Applicant on or after the due date.

(ii) Any alternative/modification in the proposal or additional information supplied subsequent to the due date, unless the same has been expressly sought for by the Authority, shall be disregarded.

(iii) Before withdrawal of proposal, it may specifically be noted that once proposals withdrawn for any reason, applicant cannot re-submit its proposal.

20. **OPENING & EVALUATION OF PROPOSALS**

(i) Opening and evaluation of proposals will be done through online process.

(ii) The technical bids will be opened on-line on the proposed due date and time prescribed in the tender document in the presence of the bidders who choose to attend. The Authority will subsequently examine and evaluate the bids in accordance with the provisions set out.

(iii) Prior to evaluation of proposals, the Authority shall determine whether each proposal is responsive to the requirements.

(iv) 'Financial Proposal' of non-responsive Applicants shall not be opened.

(v) The Technical Proposal shall be opened of those Applicants only who had physically submitted the required documents in original.

(vi) To assist in the examination, evaluation, and comparison of Bids, MoES may, at its discretion, ask any Bidder for clarification of its Bid. The request for clarification and the response shall be in writing or by fax or e-mail, but no change in the price or substance of the Bid shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered by MoES in the evaluation of the Bids.

21. **EVALUATION CRITERIA AND SELECTION PROCEDURE**

1. Prior to evaluation of the bid, MoES shall determine as to whether each bid is responsive to the requirements of this tender document.
2. The bids shall be opened on-line by the Evaluation Committee on the date and time prescribed in the first stage. The Evaluation Committee shall examine the statement of qualification, furnished by the Applicant in support of their fulfillment of eligibility, technical capability, financial capacity against the criteria prescribed in this document.

22. **The bid will be declared as non-responsive in the following case:-**

a) If a bidder submits more than one bid against this tender. The physical submissions are incomplete / inadequate to the requirements of the tender Documents.

b) The prescribed documents 'in original' as listed above are not received by MoES on or before the due date and time with proper seal and signature.

c) The EMD or an undertaking in lieu of EMD is not submitted as prescribed in the tender document.

d) If the Authorized Signatory holding Power of Attorney and Digital Signatory are not the same.

e) In the envelope any requisite document/ certificate is not in the prescribed format the same shall not be considered while evaluating the bids and the same may lead to bid being declared as non-responsive, containing physical submission is not sealed and marked as prescribed in the tender

f) A bid valid for a period of time shorter than prescribed in the tender document

g) Demand Drafts or Bank Guarantee towards EMD submitted with the document is not of appropriate amount as specified in this document. Bid is submitted without applicable fee(s) and bid security

h) If a bidder submits a conditional bid or makes changes in the terms and conditions given in this tender document

i) Failure to comply with all the requirements of tender document by a bidder

j) If the bid is not submitted in the formats prescribed in the tender document

k) The Technical Specifications of Active and Passive network equipment for Local Area Networking solution offered by the firms did not match with the specifications sought.

l) The Proposal does not contain any pre-condition, assumption or Qualification;

23. In the second stage, subsequent to pre-qualification, Financial Proposals of only shortlisted/ pre-qualified Applicants shall be opened. The opening of Financial Proposals shall also be online and the date of opening shall be intimated to pre-qualified firms. The Applicant whose commercial quote is found lowest shall be declared the "Successful Applicant" or L1. The Successful Applicant shall be awarded the contract subject to verifying the documents submitted by the L1 Bidder.

24. MoES reserves the right to reject any Proposal which is non-responsive and no request for alteration, modification, substitution or withdrawal shall be entertained by MoES

in respect of such Proposal.

25. **PERFORMANCE SECURITY**

25.1 Upon issue of a Letter of Award (LoA) by MoES, the Successful Applicant shall be required to furnish an unconditional and irrevocable Performance Security in the form of a Performance Bank Guarantee (PBG) in the prescribed format **within a period of 15 working days after issue of Award Letter**. The PBG shall be for an amount of 10% of its financial proposal value and should be in favor of DDO, Ministry of Earth Sciences, payable at New Delhi. The Performance Security shall be valid for period of contract, which may be extended appropriately such that it remains valid until one year beyond completion of the contract. The Performance Security shall be valid initially for **Five years**, which can be extended appropriately such that it remains valid until one year beyond completion of the contract.

25.2 The PBG from following banks shall only be accepted:-

PBG shall be in the form of Demand Draft / Pay order payable to DDO, MoES, New Delhi / Deposit receipt from a Nationalized Bank / Bank Guarantee from a Nationalized Bank.

25.3 Acceptance of the PBG shall also be subject to the following condition:-

a) The capital adequacy of the Bank shall not be less than the norms prescribed by RBI.
b) The bank guarantee issued by a Cooperative Bank shall not be accepted.

25.4 After acceptance of Performance Security by MoES, the EMD of the Successful Applicant shall be returned without any interest.

25.5 In the event of failure of successful applicant to submit Performance Bank Guarantee within the stipulated period as mentioned above, EMD of the successful applicant shall be forfeited. Besides above action, such bidder shall be liable to be debarred from being considered for future bids for a period of two years.

26. **MISCELLANEOUS**

26.1 This document also includes a format of the Contract Agreement to be executed with the successful Applicant for providing stipulated services to Ministry of Earth Sciences . Applicants are advised to study this document along with its amendment/ addendum carefully. Submission of the proposals will be deemed to have been done after careful study and examination of ground realities as well as all the instructions, eligibility norms, terms & conditions, requirements and specifications available in this document with full understanding of its implications. The Applicant is expected to examine carefully all the instructions, conditions of Contract, forms for submitting Proposals and Terms of Reference/ Scope of Work enumerated in this document before submitting their Proposals. Failure to comply with all the requirements of this document shall be at the Applicant's own risk. Proposals, which are not substantially responsive to the requirements of this document, shall be declared non-responsive and shall not be considered for evaluation.

26.2 The bidding process shall be governed by, and construed in accordance with the laws of India and courts at New Delhi shall have exclusive jurisdiction over all disputes arising under, pursuant to and/or in connection with the bidding process.

27. MoES, in its sole discretion and without incurring any obligation or liability, reserves the right, at any time, to:-

(i) Suspend and/or cancel the bidding process and/or amend and/or supplement the Bidding Process or modify the dates or other terms and conditions relating thereto;

(ii) Consult with any Applicant in order to receive clarification or further information;

(iii) Retain any information and/ or evidence submitted to MoES by, on behalf of, and/or in relation to any Applicant; and/or;

(iv) Independently verify, disqualify, reject and/ or accept any and all submissions or other information and/or evidence submitted by or on behalf of any Applicant.

28. MoES is not bound to reply/ respond to any representation/ letter or request for change in scope of work, eligibility criteria or any relaxation in respect of the tender conditions. No correspondence will be entertained on this matter.

29. Verification and Disqualification: MoES reserves the right to verify all statements, information and documents submitted by the Applicant and the Applicants shall, when so required by MoES, make available all such information, evidence and documents as may be necessary for such verification. Any such verification or lack of such verification, by MoES shall not relieve the Applicants of its obligations or liabilities hereunder nor will it affect any rights of MoES there under.

30. MoES reserves the right to reject any Proposal and/ or declare it non-responsive, if:

(i) At any time, a material misrepresentation is made or uncovered, or

(ii) The Applicant does not provide, within the time specified by MoES, the supplemental information sought by MoES for evaluation of the Proposals.

Such misrepresentation/ improper response shall lead to the disqualification of the Applicant. If such disqualification/ rejection occurs after the proposals have been opened and the lowest Applicant gets disqualified/ rejected, then MoES reserves the right to take any such measure as may be deemed fit in the sole discretion of MoES including annulment of the Bidding process.

31. **Important Notes:**

(a) Modifications, if required in this document shall be made by MoES on the basis of queries received from the bidders and be uploaded on e-portal and website separately through issue of an Addendum/ Amendment/Corrigendum well before the due date of submission.

(b) At any time prior to the due date, MoES may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Applicant, modify the conditions specified in this document by an amendment. Any amendment/ addendum thus issued shall be part of this document and shall be

communicated by hosting the same on the web site / e-tender portal only and should be taken into consideration by the prospective Applicants while preparing their Proposals.

(c) The Applicant must read all the instructions in this document and abide by the same scrupulously.

32. **Scope of Work**

The bidder shall perform the services specified in Terms of Reference of this tender document.

32.1. **Relationship between the Parties:**

Nothing contained herein shall be construed as establishing a relationship of master and servant or of principal and agent as between MoES and the bidder. The bidder, subject to this Contract, has complete charge of Personnel performing the services and shall be fully responsible for the Services performed by them or on their behalf hereunder. The Service Provider understands fully well that employer-employee relationship exists between them and their employees and MoES is not employer of their employees.

32.2**. Law Governing Contract:**

This Contract, its meaning and interpretation, and the relation between the Parties shall be governed by the Applicable Laws of India.

32.3 **Language:**

This Contract has been executed in English, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract.

32.4 **Effectiveness of Contract**

This Contract shall come into effect upon submission of Performance Bank Guarantee and on the date the Contract is signed by both the Parties. The date, the Contract comes into effect is defined as the Effective Date.

32.5. **Commencement of Services:**

The Service Provider shall provide the Services to MoES as per the Terms and Conditions of of this Contract.

32.6 **Expiration of Contract:**

After completion of 5 years warranty period, the Annual Maintenance Rate Contract (AMC) for maintenance shall initially be for a period of 3 years. However, the AMC may be extended for a further period of two years (total 5 years from the date of completion of the warranty).

Unless terminated earlier pursuant to the terms and conditions, this Contract shall expire at the end of 8 years, including warranty period. Thereafter the contract may be extended with mutual consent of the parties with same Terms &Conditions as neither to. (clause 40.3 and 41).

33. **Notices**

Any notice, request or consent required or permitted to be given or made pursuant to this Contract shall be in writing. Any such notice, request or consent shall be deemed

to have been given or made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent to such Party at the address specified below. The mode of service of any notice shall be either courier or registered post or e-mail or fax or by hand.

34. The addresses for service of Notice shall be:

Ministry:

Sh. Naveen Shah Director (GA)
Prithvi Bhawan,
Ministry of Earth Sciences
Lodhi Road, Opp. to India Habitat Centre,
New Delhi - 110003
Ph: 011-24669510
E-mail: jk099@ifs.nic.in

Service Provider (Bidder):

Name Designation Company Name:
Attention: ……
Address.....
Ph: …… Mobile:……
E-mail id: ……

35. **Single Bid, Two Envelop System**

This is an eTender (open tender) and the bids are to be submitted on-line only under single bid, two envelop system. The Technical and Financial Bids are called together in separate envelops. The technical bids should be submitted in the Technical Bid format (**Annexure-II**). The Financial envelop (**Annexure-III**) of technically qualified bidders will be opened after evaluation of technical bids.

First, the Technical bid will be opened and evaluated by the Tender Evaluation Committee. Based on the Technical Evaluation of the bids, the financial bid of those AUTHORIZED DEALER/DISTRIBUTOR/SYSTEM INTEGRATORs will be opened which meets the Technical eligibility criteria.

Last Date & Time for submission of bids: 19-11-2020, 03:00PM

Date and Time for pre-bid meeting: 12-11-2020, 11.30AM

Date and Time for opening of Technical Bids: 20-11-2020, 04:00PM

Date and Time for opening of Financial Bids: to be intimated later

Due to Covid-19 Pandemic, the physical meeting may not be possible to maintain social distancing. The bidders are advised to submit their quarries through the contact person's mail id. The web meeting may be arranged before the due date as per the requirement of the bidder.

36. **Place of opening-**

The bids will be opened at Prithvi Bhawan, Ministry of Earth Sciences, Lodhi Road, New Delhi

37. **Contact persons -**

I. Sh. Naveen Shah Director(GA)
Prithvi Bhawan,
Ministry of Earth Sciennces
Lodhi Road, Opp. to India Habitat Centre,
New Delhi - 110003
Ph: 011-24669510
E-mail: jk099@ifs.nic.in

II. Mrs. Manjula Daniel, Under Secretary (GA), Ministry of Earth Sciences, New Delhi-110003, Ph. 24669558

38. **Payment Terms**- 40% of the Payment will be made against the delivery of Bill of materials and equal amounts against Bank Guarantee. The rest of the payment shall be made on successful completion of installation of Active and Passive network components for Local Area Networking to achieve end-to-end connectivity. The satisfactory completion certificate should be obtained from the IT/Gen. Admin Section for releasing rest of the payment.

The payment or part payment will be made subject to submission of Inspection Report/Certificate, Invoice duly certified, authorized or any other relevant documents as required by the ministry during the payment.

Payment shall be made by MoES for the services rendered by the Service Provider, as per the provisions prescribed in the Terms of Reference

(a) The schedule of payment shall be as specified in the tender.

(b) The service provider shall be liable for the payment of all taxes and levies prevalent and/or imposed during the period of contract agreement and indemnify MoES against any such claims.

The rest of the payment shall be released only after the whole work has been completed and on its working satisfactorily.

For claiming this payment, the following documents are to be submitted to the purchasing authority.

(i) 2 Copies of Invoice

(ii) Delivery Challan/ Bills in duplicate duly pre-receipted

(iii) No payment will be made for goods rejected at the site on testing.

(iv) Payment will be made after technical inspection by the MoES to verify the technical compliance of the item supplied.

(v) The invoice should be cross-checked with the actual receipt of material/assets/services to ensure that the payment matches the actual performance;

(vi) The contractor must certify on the bill that the payment being claimed is strictly

within terms of the contract and all the obligations on his part for claiming this payment have been fulfilled as required under the contract.

(vii) The bidder should provide the name of the person and his designation for signing the invoice and tender document to claim the payment.

39. **DELIVERY:** Delivery of the goods and documents shall be made by the Supplier in accordance with the terms specified by the Purchaser in its Schedule of Requirements and conditions of the tender document and the goods shall remain at the risk of the Supplier until delivery has been completed. The Supplier should supply the items within 60 days from the date of issue of the final purchase order failing which the MoES may cancel the order and forfeit the performance security.

40. **WARRANTY AND AMC:** 5 Years Comprehensive Onsite Warranty for Active and Passive components as mentioned in the Price Bid (from the date of commissioning of system).

40.1 Replacement or repair under warranty clause shall be made by the supplier free of charges at site including freight, insurance and other incidental charges.

40.2 5 years onsite Warranty shall be provided to all the Active and Passive components of the network as mentioned in the tender document. After five years warranty period, 3 years of Comprehensive AMC (CAMC) shall be provided to the entire LAN network solution as mentioned. The cost of the CAMC should be given separately in the Financial Bid with year wise breakup. The payment for CAMC will be released after completion of every quarter after getting satisfactory service report/certificate from the IT Division/Gen. Admin. Section.

40.3 Integrated solution, supply, installation, testing and commissioning of existing LAN Infrastructure along with 5 years On Site Warranty consisting of 24x5 Next Business (NBD) support along with 3 years Comprehensive Annual Maintenance Contract (CAMC) for operation and monitoring of entire LAN infrastructure of the ministry. The selected firm should provide quarterly preventive maintenance report during the AMC period for releasing the payment.

40.4 During the support period (warranty and AMC), Service Provider shall maintain the Product (hardware/ software, etc.) to comply with parameters defined for acceptance criteria and Service Provider shall be responsible for all costs relating to labour, spares, maintenance (preventive and corrective), compliance of security requirements and transport charges from and to the designated site(s) in connection with the repair/ replacement of the Product (hardware/ equipment/ components/ software or any component/ part thereunder), which, under normal and proper use and maintenance thereof, proves defective in design, material or workmanship or fails to conform to the specifications, as specified. On site comprehensive warranty for the Product would include free replacement of spares, parts, kits, resolution of problem, if any, in Product.

40.5 Service Provider shall provide and implement patches/ upgrades/ updates for Products (software/ firmware/ OS) as and when released by Service Provider/ OEM free of cost.

40.6 Service Provider shall provide maintenance support for the Product including embedded software/ OS/ middleware etc over the entire period of Contract.

40.7 Support would be on-site and comprehensive in nature and must have back to back support from the OEM/Service Provider. Undertaking on the lines of

ANNEXURE -VII of this RFP document is required to be submitted by Service Provider, duly endorsed by the OEM that in case Service Provider fails to provide Services then OEM shall provide the same at no extra cost, to the satisfaction of the Ministry.

40.8 Service Provider warrants Products against defect arising out of faulty design, materials, etc. during the specified support period. Service Provider will provide support for operating systems and other pre-installed software components/system software during the specified period of the hardware on which these software and operating system will be installed. Service Provider shall repair or replace worn out or defective parts including all plastic parts of the Equipment at his own cost including the cost of transport.

41. **PENALTY:**

a) All the equipment/items must be delivered to site (Prithvi Bhawan, Lodi Road, New Delhi) within 4 weeks of placement of order by the Ministry. For any delay in delivery of the equipment/items listed in BoQ, liquidated damages will be imposed on the vendor at 1% of the price of equipment/item not delivered per week of delay. The liquidated damages due to delay in delivery of equipment/item will be subject to a maximum limit of 5% of Supply, Installation, Testing and Commissioning (SITC) of the project.

Installation, testing and commissioning of the LAN equipment must be completed within 6 weeks from the date of placement of order by the Ministry. After the installation of the equipment is complete from the vendor's side, the same shall be intimated to the Ministry. The entire system should operation 3 months from the date of acceptance or receiving work order from MoES. The competent authority of the Ministry will evaluate the completion of work against the scope of work of this tender document. If the competent authority accepts the SITC work, then an acceptance letter to that effect will be issued to the vendor. The date of issue of acceptance letter will be considered as the Date of Commissioning and completion of SITC work. The Date of Commissioning should be within 8 weeks from the date of placement of order on the vendor. For any delay in completion of SITC work, liquidated damages will be imposed on the vendor at 1% of the installation cost for each week of delay. The liquidated damages due to delay in completion of SITC work will be subject to a maximum limit of 5% of SITC cost. This 5% of liquidated damages is over and above the liquidated damages mentioned in Clause 49 below.

b) During the CAMC period, any **active or passive components of LAN Network** setup is found defective or in case does not work for any reason, the AMC contractor or successful bidder should attend the call within six working hours from the time of reporting through e-mail/ telephone / fax etc. and rectify the problem within Next Business Day (NBD) or 24 Hrs, If any spare parts is to be replaced/repaired, it must be carried out within 2 days from the date of registering the complaint, failing which penalty of Rs. 1000 per day will be imposed subject to maximum period of 30 days. The complaint is not attended or could not resolve the issues beyond 30 days, the CAMC will be cancelled and the performance security will be forfeited and the LD clause will be imposed.

42. **Project Administration**

a. Designated Officer:

The MoES designates Director (GA) who will be responsible for the coordination of activities under this contract, for acceptance and approval of the services and of other deliverables by MoES and for receiving and approving invoices for the payment.

b. Confidentiality of the Assignment/Findings

The Service Provider shall not, during the term of this contract and after its expiration, disclose any proprietary or confidential information relating to the services, this contract or the MoES' business or operations without the prior written consent of MoES.

43. **Ownership of Material**

Any studies report or other material, data or information otherwise prepared by the Service Provider for MoES under the contract will remain the property of Ministry of Earth Sciences.

44. **Dispute Resolution**

(a) Any dispute arising out of this Contract shall be referred to MoES.

(b) This Contract shall be governed by, and construed in accordance with, the laws of India and courts at New Delhi shall have exclusive jurisdiction over all disputes arising under, pursuant to and/or in connection with this Contract.

45. **Termination**

MoES has the sole discretion, for any reason whatsoever, to terminate this Contract for by giving 30 days prior notice without assigning any reason.

46. **Number of LAN Nodes to be installed-** This Ministry has carried out a survey of this building revamping LAN and accordingly, it is estimated that **220 new LAN Nodes** would be required to be installed along with existing nodes. The damaged / faulty cables to be removed and all patch cards of Racks have to be redressed with proper tagging. All bidders should quote their rates as per the estimated number of LAN Nodes and other material suggested in this Ministry's estimate at Annex II.

The site survey has been done, bidders are advised to visit the site for on the spot verification. The MoES will not pay any payment for any other site survey of bidder. The site certification will be carried out after completion of the work by the L1 Bidder. The site certification should be free of cost. Nothing extra shall be paid by MoES on this account. After completion, the bidder to provide all completion documents and completion certifications to MoES.

47. The bidder should quote Buy-Back option for the existing Active and Passive components of LAN infrastructure of the ministry. The offered price may be given in the financial bid format. The list of existing Active and Passive components of LAN items are attached as Annexure-X.

48. The selected bidders should have the stock of the spare parts (active and passive components) for the suggested LAN nodes and should be readily available for replacement 24X7.

49. **LIQUIDATED DAMAGES**: The date of delivery and installation stipulated in the acceptance of the tender should be deemed to be the essence of the contract and delivery must be completed no later than 60 days from the award of contract. Extension will not be granted except in exceptional circumstances. Should, however, deliveries be made after expiry of the contracted delivery period, without prior concurrence of the purchaser and be accepted by the consignee, such delivery will not deprive the purchaser of his right to recover liquidated damage. If the supplier fails to complete the entire work including supply, delivery, installation, commissioning and making operational the entire LAN setup in MoES within the stipulated time of 3 months, penalty @ 1% of the delay will be imposed subject to a maximum of 10% (per cent) of the value of delayed goods, installation, testing and commissioning of the project.

Provided, also that if the contract is terminated under this clause, the MoES shall be at liberty to take over from the Supplier at a price to be fixed by the purchaser, which shall be final, all unused, undamaged and acceptable materials, bought out components and stores in course of manufacture which may be in possession of the Supplier at the time of such termination or such portion thereof as the purchaser may deem fit, except such materials, bought out components and stores as the Supplier may with the concurrence of the MoES elect to retain.

50. **Arbritration-** All disputes or differences arising out of or in connection with the contract shall be settled by bilateral discussions. If any dispute cannot be settled by mutual discussions within thirty days an independent arbitrator shall be appointed on consent of both parties. The arbitration proceedings shall be held under the provisions of the Arbitration and Conciliation Act 1996 and any of its subsequent amendments. The arbitration proceedings shall be in English and the venue of arbitration shall be Delhi.

51. **Force Majeure-**

Neither party shall in any event be liable for any failure to perform its obligations under this Agreement due to any events beyond the reasonable control of either party or any events of force majeure. The decision of MoES shall be final in this regard.

a. Notwithstanding the provisions stated above, Service Provider shall not be liable for forfeiture of its performance security, penalty or termination for default, if and to the extent that, it's delay in performance or other failure to perform its obligations under the contract is the result of an event of Force Majeure.

b. For purposes of this clause, ―Force Majeure means an event beyond the control of the Service Provider and not involving Service Provider's fault or negligence and not foreseeable. Such events may include, but are not be limited to, acts of God, wars, revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.

c. If a ―Force Majeure situation arises, Service Provider shall promptly notify the Ministry in writing of such conditions and the cause thereof. Unless otherwise directed by the Ministry in writing, Service Provider shall continue to perform its obligations under the contract as far as is reasonably practical, and shall

seek all reasonable alternative means for performance not prevented by the ―Force Majeure event.

d. Time for performance of the relative obligation suspended by ―Force Majeure shall then stand extended by the period for which such cause lasts.

In case of any dispute the Jurisdiction of the case shall be in Delhi Court Only.

52. **TENDER BID SECURITY:**

52.1 **The Earnest Money Deposit (EMD)** of **Rs.10,00,000/- (Rupees Ten Lakhs only),** shall be furnished in the form of Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee from any of the Commercial Banks in India **in favor of DDO, MoES and payable at New Delhi** shall not be liable to pay any interest on the EMD. The EMD shall be valid for a minimum period of 120 **days** from the last date of submission of the tender. For counting the period of validity of 120 days, the last date of submission of the tender shall be excluded.

52.2 Any proposal not accompanied by prescribed EMD and / or Bid Securing declaration in the prescribed manner shall be summarily rejected. The EMD should be submitted to the MoES in the form of sealed envelope on or before the mentioned last date.

52.3 The EMD of unsuccessful Applicants shall be returned without any interest whatsoever within 60 days upon declaration of successful bidder. The Applicant should indicate details of their bank account number for crediting the refund of EMD through ECS (RTGS/NEFT). This information should be provided in the Technical Proposal.

52.4 A bidder's Bid Security will be forfeited if the bidder withdraws or amends its/his tender or impairs or derogates from the tender in any respect within the period of validity of the tender or if the successful bidder fails to furnish the required Performance Security within the specified period.

53. **FORFEITURE OF EARNEST MONEY DEPOSIT**: The EMD shall be forfeited and/ or appropriated by Ministry of Earth Sciences as mutually **agreed genuine** pre-estimated damages payable to MoES for, inter-alia, time, cost and effort of the ministry without prejudice to any other right or remedy that may be available to MoES under the provisions contained in this document and/or under the contract or otherwise, under the following circumstances:

a) If a Bidder engages in a corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice; or

b) If the Bid is withdrawn during the intervening period between the bid due date and the expiration of the Bid Validity; or If the bidder tries to influence the evaluation process.

c) If a Bidder having been notified Successful Bidder by MoES with the issuance of Letter of Award (LOA) during the bid validity period. Fails or refuses to furnish the Performance Security, in accordance with the conditions of Tender; or Fails or refuses to execute/sign the Contract within the stipulated time frame.

54. **Performance Security-** The Lowest (L1) or selected bidder shall furnish performance security in the form of an account payee demand draft, fixed deposit receipt from a commercial bank, bank guarantee issued/confirmed from any of the commercial bank in India in an acceptable form **drawn in favor of DDO, MoES and payable at New Delhi** for an amount equal to 10% of the value of Contract Agreement within 10 days from the date of issue of Letter of Acceptance.

54.1 The proceeds of the performance security shall be payable to the ministry as compensation for any loss resulting from the supplier's failure to complete its obligations under the Contract.

54.2 The Performance Security Bond shall be in the form of Bank Guarantee issued by a Commercial Bank and in the form provided in 'Annexure-IV' of this Bid Document or through Fixed Deposit Receipt (FDR).

54.3 The Performance Security Bond will be discharged by the ministry after a period of sixty days beyond completion of the supplier's performance including warranty and AMC obligations under the contract.

55. This is an E Tender and the Technical & Financial Bids are to be submitted Online only through http://eprocure.gov.in/eprocure/app. The Intended bidders can participate in the eTendering and such tenderer should have a Digital Signature for the purpose of participation in the E- Tender process. The "Instructions for online Bid Submission are given at **Annexure-I**". The specifications of the items/number of items/other details is given in **Annexure II & III**.

55.1 The bidders are required to visit Prithvi Bhavan to see the actual installations to assess the quantum of work involved before submitting the tender. Once the tender is submitted, it will be deemed that the bidder has seen and understood the complete work involved for each of the systems.

55.2 Technical Bid will be opened first and Financial Bid of only those firms will be opened by the Tender Committee which will be found eligible as per the Technical Bid Evaluation.

55.3 The Ministry reserves the right to reject any or all the tenders without assigning any reason.

56. The Active and Passive components of the LAN network hardware items should be compatible with the NIC and other Govt. Networks for configuration of security and other features as per the guidelines of MHA and Cert-IN. The bidder should mention the make of Active and Passive hardware /software items of LAN network solution in the tender. The bidder should also give an undertaking that the items quoted or supplied is not from China or banned countries as announced by Govt. of India.

Naveen Shah
Director (Gen. Admn.)

Copy to:

1. NIC, Ministry of Earth Science for posting the tender document on Ministry of Earth Science's Website.
2. All Ministries/Department for broad publicity.
3. Central Public Procurement Portal website.

Naveen Shah
Director (Gen. Admn.)

Tender No. No. MoES/05/13/2019-IT

Document Control Sheet

Tender No.	No. MoES/05/13/2019-IT
Name of Organization	MINISTRY OF EARTH SCIENCES (MoES)
Last Date and Time online submission of Bid & submission of EMD (in tender box kept at Room No. 01 of MoES)	19/11/2020 (15:00 Hrs)
Date and Time of Opening of Technical Bid	20/11/2020 (16:00 Hrs)
Address for Communication	Director (General Admn.) Ministry of Earth Sciences Prithvi Bhawan, Lodhi Road, New Delhi –110003 Tel. 011 24669510

Note: *In case, any holiday is declared by the Government on the day of opening, the tenders will be opened on the next working day at the same time. The Ministry reserves the right to accept or reject any or all the tenders without assigning any reason thereof.*

56. Terms & Conditions

I. Bidder will ensure that the bill of materials will be delivered, installed successfully and operational within the stipulated period of 5 months (150 Days) of award of work made, failing which Liquidated damages will be imposed as per the clause 50.

II. Bidders will bear the responsibility to bring the items and installing the same in the office.

III. Ministry of Earth Science reserves the right to reject any quotation completely or partially without assigning any reason.

IV. Ministry of Earth Science also reserves the right to cancel the tender before installation, if the items of the bidders are not found satisfactory.

V. The successful bidder has to provide training on operation of LAN Network including Active and passive components their basic troubleshooting. The bidder has also to provide all the related Operation Manuals and Training to the ministry after completion of the project.

57. **Documents required for the Technical Bid Evaluation - Annexure V**

(**Signature of the Authorized Person/Officer of Bidder**)

Contact Person:
Address of the Bidder
Phone Number:
Mobile No. eMailail Id:

ANNEXURE-I

Instructions for Online Bid Submission

The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal. More information useful for submitting online bids on the CPP Portal may be obtained at: https://eprocure.gov.in/eprocure/app.

REGISTRATION

1. Bidders are required to enrol on the e-Procurement module of the Central Public Procurement Portal (URL: https://eprocure.gov.in/eprocure/app.) by clicking on the link "Online Bidder Enrolment" on the CPP Portal which is free of charge.
2. As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
3. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
4. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificated with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g.Sify/TCS/nCode/eMudhra etc.), with their profile.
5. Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to other which may lead to misuse.
6. Bidder than logs on to the site through the secured long-in by entering their user ID/password and the password of the DSC/ eToken.

SEARCHING FOR TENDER DOCUMENTS

1. There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.
2. Once the bidders have selected the tenders they are interested in, they may download the requirement documents/ tender schedules. These tenders can be moved to the respective 'My Tenders' folder.

   This would enable the CPP Portal to intimate the bidders through SMS/e-mail in case there is any corrigendum issued to the tender document.
3. The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification/help from the Helpdesk.

PREPARATION OF BIDS

1. Bidder should take into account any corrigendum published on the tender document before submitting their bids.
2. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents- including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
3. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender documents/schedule and generally, they can be in PDF/XLS/RAR/DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
4. To avoid the time and effort required in uploading the same set of standard document which are required to be submitted as part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Space" or "Other important Documents" area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for

   bid submission process.

SUBMISSION OF BIDS

1. Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
2. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender documents.
3. Bidder has to select the payment option as "offline" to pay the tender fee/FIXED DEPOSIT RECEIPT (FDR) as applicable and enter details of the instrument.
4. Bidder should prepare the IMD as per the instructions specified in the tender documents. The original should be posted/couriered/given in person to the concerned official, latest by the last date of bid submission or as specified in their tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected.
5. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has given as a standard BoQ format with the tender documents, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it only online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.

6. The server time (which is displayed on the bidder's dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
7. All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentially of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using buyers/bid opener public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
8. The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
9. Upon the successful and timely submission of bids (i.e. after Clicking "Freeze Bid Submission" in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
10. The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

ASSISTANCE TO BIDDERS

1. Any queries relating to the tender documents and the terms and conditions contained therein should be addressed to the Tender inviting Authority for a tender or the relevant contract person indicated in the tender.
2. Any queries relating to the process of online bid submission or queries relating to CCP portal in general may be directed to the 24×7 CPP Portal Helpdesk. The contact number for the helpdesk is 180030702232.

TECHNICAL SPECIFICATIONS OF VARIOUS COMPONENTS OF ACTIVE AND PASSIVE NETWORKING SOLUTION RECOMMENDED FOR GOVERNMENT BUILDINGS SHOULD BE MENTIONED AS PER DATA SHEET ATTACHED

ANNEXURE-II

TECHNICAL BID

S.No	Item Description	Description	Qty	Compliance (Y/N)
1	**Core Switch**	24x 1/10/25G Gigabit Ethernet + 4x 40/100G Uplink as per detailed technical specifications	2	
2	**Access Switch - 24 Port**	24 nos. 10/100/1000 Base-T ports and additional 4 nos. SFP+ uplinks ports as per detailed technical specifications	10	
3	**Access Switch - 48 Port**	48 nos. 10/100/1000 Base-T ports and additional 4 nos. SFP+ uplinks ports as per detailed technical specifications	7	
4	**Access Switch - 24 Port POE+**	24 nos. 10/100/1000 Base-T POE+ ports and additional 4 nos. SFP+ uplinks ports as per detailed technical specifications	10	
5	**10G MM Transceivers**	10GBASE-SR SFP Module,	58	
6	**1G SM Transceivers**	1000BASE-LX/LH SFP transceiver module, MMF/SMF, 1310nm, DOM	2	
7	**1G Copper Transceivers**	1000BASE-T SFP transceiver module for Category 5 copper wire	10	
8	**10G Active Optical Cable**	40GBASE Active Optical Cable, 3m (QSFP to QSFP active optical cables)	2	
9	**25G Active Optical Cable**	25GBASE Active Optical SFP28 Cable, 5M	2	
10	**10G Base SFP+ Active Cable**	10GBASE-CU SFP+ Cable 1 Meter	14	
11	**AP Licenses for Existing NIC Wireless Controllers**	Access Point License	28	
12	**Access Point -Type - 1**	802.11ac W2 AP ; 4x4 Internal Ant; 2xGbE as per detailed technical specifications	10	
13	**Access Point -Type - 2**	802.11ac Wave-2,3X3 MU-MIMO as per detailed technical specifications	15	
14	**Access Point -Type - 3**	802.11ac W2 AP 4x4; Modular; mGig as per detailed technical specifications	3	
15.	**Comprehensive Annual Maintenance Contract (CAMC)**	Active Components of the proposed LAN network of MoES.	3 Years	
	Year wise cost breakup.	6th Year 7th Year 8th Year		

16.	**Buy-Back of existing LAN**	**Active and passive components** Price for buy-back of Active components of existing LAN Infra. (-)	List attached (Annexure-X)	

Note: The detailed AP specifications are given in PART-C.
The Item No. 17 will be subtracted from the Grand Total.

Active components

S.No.	General Specifications	Brand, Model No./Name	Brochure/ Literature attached (Y/N)	Compliance (Y/N)
1	**Core Switch**			
1.1	**General Features :**			
1.1.1	Switch shall be 1U and rack mountable in standard min. 19" rack.			
1.1.2	Switch shall have min. 16 GB RAM and 16 GB Flash			
1.1.3	Switch should support optional 900 SSD to host 3rd party container based application.			
1.1.4	Switch shall have hot swappable 1:1 redundant internal power supply and redundant fan.			
1.1.5	Switch shall **support** VSS or equivalent features allows links that are physically connected to two different switch to appear as a single port channel			
1.1.6	Shall support In Service Software Upgrade (ISSU) to provide an upgrade of the entire platform or an individual task/process without impacting hardware forwarding. ISSU supports upgrades, downgrades, and rollbacks.			
1.2	**Performance :**			
1.2.1	Switching system shall have minimum 80K MAC Addresses and 1K VLANs.			
1.2.2	Switch should support minimum 25K ACLs, 32K Ipv6 Multicast and 200K IPv4, 200K IPv6 Routes..			
1.2.3	Switch shall support application visibility and traffic monitoring with minimum 60 K sflow/jflow/netFlow entries.			
1.2.4	Packet buffer : 36 MB			
1.3	**Functionality :**			

1.3.1	Should support IEEE Standards of Ethernet: IEEE 802.1D, 802.1s, 802.1w, 802.1x, 802.3ad, 802.1ae (256-bit and 128-bit AES), 802.3x, 802.1p, 802.1Q, 1588v2			
1.3.2	Should support AES-256 support with MACSEC-256 encryption algorithm on hardware *			
1.3.3	Must support BGP, MPLS, IS-IS, VRF, VXLAN, NAT, OSPF Routed Access, Policy-Based Routing (PBR), PIM SM, and Virtual Router Redundancy Protocol (VRRP) from Day 1			
1.3.4	Shall have 802.1p class of service, marking, classification, policing and shaping. Should support strict priority queuing.			
1.3.5	Switch should support management features like SSHv2, SNMPv2c, SNMPv3, IGMP, Netconf/YANG.			
1.3.6	Switch should support port security, DHCP snooping, Spanning tree root guard, First Hop Security.			
1.3.7	IPv6 support in hardware, providing wire rate forwarding for IPv6 network			
1.3.8	Should support 802.1x authentication and accounting, IPv4 and IPv6 ACLs and Dynamic VLAN assignment.			
1.3.9	Eight egress queues per port for different types.			
1.3.10	During system boots, the system's software signatures should be checked for integrity. System should capable to understand that system OS are authentic and unmodified, it should have cryptographically signed images to provide assurance that the firmware & BIOS are authentic.			
1.4	**Interface**			
1.4.1	Switch should have min. 24x 1/10/25G Gigabit Ethernet + 4x 40/100G Uplink. Bidder should provide transceivers as per SOR.			
1.5	**Certification:**			
1.5.1	Switch shall conform to UL 60950, IEC 60950, CSA 60950, EN 60950 Standards			
1.5.2	Switch / Switch's Operating System should be tested for EAL 2/NDPP or above under Common Criteria Certification.			
2	**Access Switch - 24 Port**			
2.1	**General Features :**			
2.1.1	Switch should be min. 1U and rack mountable in standard 19" rack.			
2.1.2	Switch should support internal field replaceable unit redundant power supply.			

2.1.3	Switch should have minimum 2 GB RAM and 2 GB Flash.			
2.1.4	Switch should have dedicated slot for modular stacking, in addition to asked uplink ports. Should support for minimum 48 Gbps of stacking throughput with 8 switch in single stack.			
2.2	**Performance :**			
2.2.1	Switch shall have minimum 128 Gbps of switching fabric and 95.23 Mbps of forwarding rate.*			
2.2.2	Switch shall have minimum 16K MAC Addresses and 250 active VLAN.			
2.2.3	Should support minimum 11K IPv4 routes or more			
2.2.4	Switch shall have 1K or more multicast routes.			
2.2.5	Switch should support at least 16K flow entries			
2.2.6	Switch should support 128 or more STP Instances.			
2.2.7	Switch should have 6MB or more packet buffer.			
2.3	**Functionality :**			
2.3.1	Switch should support IEEE Standards of Ethernet: IEEE 802.1D, 802.1s, 802.1w, 802.1x, 802.3ad, 802.3x, 802.1p, 802.1Q, 802.3, 802.3u, 802.3ab, 802.3z.			
2.3.2	Switch must have functionality like static routing, RIP, PIM, OSPF, VRRP, PBR and QoS features from Day1			
2.3.3	Switch should support network segmentation that overcomes the limitation of VLANs using VXLAN and VRFs.			
2.3.4	Switch shall have 802.1p class of service, marking, classification, policing and shaping and eight egress queues.			
2.3.5	Switch should support management features like SSHv2, SNMPv2c, SNMPv3, NTP, RADIUS and TACACS+ .			
2.3.6	Switch should support IPv6 Binding Integrity Guard, IPv6 Snooping, IPv6 RA Guard, IPv6 DHCP Guard, IPv6 Neighbour Discovery Inspection and IPv6 Source Guard.			
2.3.7	Switch should support 802.1x authentication and accounting, IPv4 and IPv6 ACLs and Dynamic VLAN assignment and MACSec-128 on hardware for all ports.			
2.3.8	Switch must have the capabilities to enable automatic configuration of switch ports as devices connect to the switch for the device type.			

2.3.9	During system boots, the system's software signatures should be checked for integrity. System should capable to understand that system OS are authentic and unmodified, it should have cryptographically signed images to provide assurance that the firmware & BIOS are authentic.			
2.4	**Interfaces**			
2.4.1	Switch shall have min. 24 nos. 10/100/1000 Base-T ports and additional 4 nos. SFP+ uplinks ports.			
2.5	**Certification:**			
2.5.1	Switch shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.			
2.5.2	Switch shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.			
2.5.3	Switch / Switch's Operating System should be tested for EAL 2/NDPP or above under Common Criteria Certification.			
2.5.4	OEM should be listed in Gartner Leader Quadrant for Wired and Wireless LAN Infrastructure from last 3 years before releasing this RFP.			
3	**Access Switch - 24 Port POE**			
3.1	**General Features :**			
3.1.1	Switch should be min. 1U and rack mountable in standard 19" rack.			
3.1.2	Switch should support internal field replaceable unit redundant power supply.			
3.1.3	Switch should have minimum 2 GB RAM and 2 GB Flash.			
3.1.4	Switch should have dedicated slot for modular stacking, in addition to asked uplink ports. Should support for minimum 48 Gbps of stacking throughput with 8 switch in single stack.			
3.2	**Performance:**			
3.2.1	Switch shall have minimum 128 Gbps of switching fabric and min. 95.23 Mbps of forwarding rate.*			
3.2.2	Switch shall have minimum 16K MAC Addresses and 250 active VLAN.			
3.2.3	Should support minimum 11K IPv4 routes or more			
3.2.4	Switch shall have 1K or more multicast routes.			
3.2.5	Switch should support at least 16K flow entries			
3.2.6	Switch should support min. 128 or more STP Instances.			

3.2.7	Switch should have 6MB or more packet buffer.			
3.3	**Functionality:**			
3.3.1	Switch should support IEEE Standards of Ethernet: IEEE 802.1D, 802.1s, 802.1w, 802.1x, 802.3ad, 802.3x, 802.1p, 802.1Q, 802.3, 802.3u, 802.3ab, 802.3z.			
3.3.2	Switch must have functionality like static routing, RIP, PIM, OSPF, VRRP, PBR and QoS features from Day1			
3.3.3	Switch should support network segmentation that overcomes the limitation of VLANs using VXLAN and VRFs.			
3.3.4	Switch shall have 802.1p class of service, marking, classification, policing and shaping and eight egress queues.			
3.3.5	Switch should support management features like SSHv2, SNMPv2c, SNMPv3, NTP, RADIUS and TACACS+ .			
3.3.6	Switch should support IPv6 Binding Integrity Guard, IPv6 Snooping, IPv6 RA Guard, IPv6 DHCP Guard, IPv6 Neighbour Discovery Inspection and IPv6 Source Guard.			
3.3.7	Switch should support min. 802.1x authentication and accounting, IPv4 and IPv6 ACLs and Dynamic VLAN assignment and MACSec-128 on hardware for all ports.			
3.3.8	Switch must have the capabilities to enable automatic configuration of switch ports as devices connect to the switch for the device type.			
3.3.9	During system boots, the system's software signatures should be checked for integrity. System should capable to understand that system OS are authentic and unmodified, it should have cryptographically signed images to provide assurance that the firmware & BIOS are authentic.			
3.4	**Interfaces**			
3.4.1	Switch shall have min. 24 nos. 10/100/1000 Base-T ports and additional 4 nos. SFP+ uplinks ports.			
3.4.2	All 24 port should support PoE (802.3af) and PoE+ (802.3at) with a PoE power budget of 370 W.			
3.5	**Certification:**			
3.5.1	Switch shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.			

3.5.2	Switch shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.			
3.5.3	Switch / Switch's Operating System should be tested for EAL 2/NDPP or above under Common Criteria Certification.			
3.5.4	OEM should be listed in Gartner Leader Quadrant for Wired and Wireless LAN Infrastructure from last 3 years before releasing this RFP.			
4	**Access Switch - 48 Port**			
4.1	**General Features:**			
4.1.1	Switch should be min. 1U and rack mountable in standard 19" rack.			
4.1.2	Switch should support internal field replaceable unit redundant power supply.			
4.1.3	Switch should have minimum 2 GB RAM and 2 GB Flash.			
4.1.4	Switch should have dedicated slot for modular stacking, in addition to asked uplink ports. Should support for minimum 48 Gbps of stacking throughput with min 8 switch in single stack.			
4.2	**Performance:**			
4.2.1	Switch shall have minimum 176 Gbps of switching fabric and 130 Mbps of forwarding rate.			
4.2.2	Switch shall have minimum 16K MAC Addresses and 250 active VLAN.			
4.2.3	Should support minimum 11K IPv4 routes or more			
4.2.4	Switch shall have 1K or more multicast routes.			
4.2.5	Switch should support at least 16K flow entries			
4.2.6	Switch should support 128 or more STP Instances.			
4.2.7	Switch should have 6MB or more packet buffer.			
4.3	**Functionality:**			
4.3.1	Switch should support IEEE Standards of Ethernet: IEEE 802.1D, 802.1s, 802.1w, 802.1x, 802.3ad, 802.3x, 802.1p, 802.1Q, 802.3, 802.3u, 802.3ab, 802.3z.			
4.3.2	Switch must have functionality like static routing, RIP, REP PIM, OSPF, VRRP, PBR and QoS features from Day1.			
4.3.3	Switch should support network segmentation that overcomes the limitation of VLANs using VXLAN and VRFs.			
4.3.4	Switch shall have 802.1p class of service, marking, classification, policing and shaping and eight egress queues.			

4.3.5	Switch should support management features like SSHv2, SNMPv2c, SNMPv3, NTP, RADIUS and TACACS+ .			
4.3.6	Switch should support IPv6 Binding Integrity Guard, IPv6 Snooping, IPv6 RA Guard, IPv6 DHCP Guard, IPv6 Neighbour Discovery Inspection and IPv6 Source Guard.			
4.3.7	Switch should support 802.1x authentication and accounting, IPv4 and IPv6 ACLs and Dynamic VLAN assignment and MACSec-128 on hardware for all ports.			
4.3.8	Switch must have the capabilities to enable automatic configuration of switch ports as devices connect to the switch for the device type.			
4.3.9	During system boots, the system's software signatures should be checked for integrity. System should capable to understand that system OS are authentic and unmodified, it should have cryptographically signed images to provide assurance that the firmware & BIOS are authentic.			
4.4	**Interface**			
4.4.1	Switch shall have min. 48 nos. 10/100/1000 Base-T ports and additional 4 nos. SFP+ uplinks ports.			
4.4.2	All 48 port should support PoE (802.3af) and PoE+ (802.3at) with a PoE power budget of 720 W.			
4.5	**Certification:**			
4.5.1	Switch shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.			
4.5.2	Switch shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.			
4.5.3	Switch / Switch's Operating System should be tested for EAL 2/NDPP or above under Common Criteria Certification.			
4.5.4	OEM should be listed in Gartner Leader Quadrant for Wired and Wireless LAN Infrastructure from last 3 years before releasing this RFP.			
5	**Access Switch - 48 Port**			
5.1	**General Features:**			
5.1.1	Switch should be min. 1U and rack mountable in standard 19" rack.			

5.1.2	Switch should support internal field replaceable unit redundant power supply.			
5.1.3	Switch should have minimum 2 GB RAM and 2 GB Flash.			
5.1.4	Switch should have dedicated slot for modular stacking, in addition to asked uplink ports. Should support for minimum 48 Gbps of stacking throughput with 8 switch in single stack.			
5.2	**Performance:**			
5.2.1	Switch shall have minimum 176 Gbps of switching fabric and 130 Mbps of forwarding rate.			
5.2.2	Switch shall have minimum 16K MAC Addresses and 250 active VLAN.			
5.2.3	Should support minimum 11K IPv4 routes or more			
5.2.4	Switch shall have 1K or more multicast routes.			
5.2.5	Switch should support at least 16K flow entries			
5.2.6	Switch should support 128 or more STP Instances.			
5.2.7	Switch should have 6MB or more packet buffer.			
5.3	**Functionality:**			
5.3.1	Switch should support IEEE Standards of Ethernet: IEEE 802.1D, 802.1s, 802.1w, 802.1x, 802.3ad, 802.3x, 802.1p, 802.1Q, 802.3, 802.3u, 802.3ab, 802.3z.			
5.3.2	Switch must have functionality like static routing, RIP, REP PIM, OSPF, VRRP, PBR and QoS features from Day1.			
5.3.3	Switch should support network segmentation that overcomes the limitation of VLANs using VXLAN and VRFs.			
5.3.4	Switch shall have 802.1p class of service, marking, classification, policing and shaping and eight egress queues.			
5.3.5	Switch should support management features like SSHv2, SNMPv2c, SNMPv3, NTP, RADIUS and TACACS+ .			
5.3.6	Switch should support IPv6 Binding Integrity Guard, IPv6 Snooping, IPv6 RA Guard, IPv6 DHCP Guard, IPv6 Neighbour Discovery Inspection and IPv6 Source Guard.			
5.3.7	Switch should support 802.1x authentication and accounting, IPv4 and IPv6 ACLs and Dynamic VLAN assignment and MACSec-128 on hardware for all ports.			
5.3.8	Switch must have the capabilities to enable automatic configuration of switch ports as devices connect to the switch for the device type.			

5.3.9	During system boots, the system's software signatures should be checked for integrity. System should capable to understand that system OS are authentic and unmodified, it should have cryptographically signed images to provide assurance that the firmware & BIOS are authentic.			
5.4	**Interface**			
5.4.1	Switch shall have 48 nos. 10/100/1000 Base-T ports and additional 4 nos. SFP+ uplinks ports.			
5.5	**Certification:**			
5.5.1	Switch shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.			
5.5.2	Switch shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.			
5.5.3	Switch / Switch's Operating System should be tested for EAL 2/NDPP or above under Common Criteria Certification.			
5.5.4	OEM should be listed in Gartner Leader Quadrant for Wired and Wireless LAN Infrastructure from last 3 years before releasing this RFP.			
Wireless LAN Controller				
	The all AP license will be integrating with existing NIC Wireless Controller			
	Access Point -Type 1			
1	Access Point shall be able to scale Wave-2 MU-MIMO operation of min. 160MHz channel bandwidth			
2	Access point shall be able to perform spectrum analyser.			
3	Access Point shall be able to double .11ac radio capacity by providing automatic selection of RF band between 2.4GHz and 5GHz in a single radio interface			
4	Access Point shall be able to support dedicated, dual-band security monitor mode AP, while simultaneously serves as 802.11ac Wave-2 AP			
5	In addition to 4x4:3SS Wave-2 .11ac radio, AP shall be able to support extra radio interface that support dynamic, auto-change between full-time dual-band monitoring and AP mode			
6	Access point shall support dual 5GHz radio allowing upto total physical layer data rate of 4.6Gbps.			

7	Hardware-Accelerated Deep Packet Inspection (Application Visibility) and Control to increase overall access point performance			
8	Access Point shall be able to leverage current Access Point mount kit and cable conduit			
9	Access Point shall be able to support .3ad LACP(LAG) using single IP address			
10	Must support minimum of 23dbm of transmit power in both 2.4Ghz and 5Ghz radios. And should follow the local regulatory Norms.			
11	Must support AP enforced load-balance between 2.4Ghz and 5Ghz band.			
12	Must incorporate radio resource management for power, channel and performance optimization			
13	Must have -97 dB or better Receiver Sensitivity.			
14	Must support Proactive Key Caching and/or other methods for Fast Secure Roaming.			
15	Must support Management Frame Protection.			
16	Should support locally-significant certificates on the APs using a Public Key Infrastructure (PKI).			
17	Access Points must support Hardware-based encrypted user data and management traffic between controller and Access point for better security.			
18	Must support the ability to serve clients and monitor the RF environment concurrently.			
19	Same model AP that serves clients must be able to be dedicated to monitoring the RF environment.			
20	Must be plenum-rated (UL2043).			
21	Must support 16 WLANs per AP for SSID deployment flexibility.			
22	Access Point Must continue serving clients when link to controller is down. It should also have option to authenticate user through Radius server directly from Access Point during link unavailability to controller.			
23	Must support telnet and/or SSH login to APs directly for troubleshooting flexibility.			
24	802.11e and WMM			
25	Must support QoS and Video Call Admission Control capabilities.			
Access Point -Type 2				
1	Access Point shall support the latest dual band, 2x2:2SS Wave-2, MU-MIMO standard-based WiFi			
2	Access Point shall provide console port that using standard RJ-45 connector			

3	Must support minimum of 20dbm of transmit power in both 2.4Ghz and 5Ghz radios. And should follow the local regulatory Norms.			
4	Must support AP enforced load-balance between 2.4Ghz and 5Ghz band.			
5	Must incorporate radio resource management for power, channel and performance optimization			
6	Must have -97 dB or better Receiver Sensitivity.			
7	Must support Proactive Key Caching and/or other methods for Fast Secure Roaming.			
8	Must support Management Frame Protection.			
9	Should support locally-significant certificates on the APs using a Public Key Infrastructure (PKI).			
10	Access Points must support Hardware-based encrypted user data and management traffic between controller and Access point for better security.			
11	Must support the ability to serve clients and monitor the RF environment concurrently.			
12	Same model AP that serves clients must be able to be dedicated to monitoring the RF environment.			
13	Must be plenum-rated (UL2043).			
14	Must support 16 WLANs per AP for SSID deployment flexibility.			
15	Access Point Must continue serving clients when link to controller is down. It should also have option to authenticate user through Radius server directly from Access Point during link unavailability to controller.			
16	Must support telnet and/or SSH login to APs directly for troubleshooting flexibility.			
17	Must support Power over Ethernet and power injectors.			
18	802.11e and WMM			
19	Must support Reliable Multicast to Unicast conversion to maintain video quality at AP level			
20	Must support QoS and Video Call Admission Control capabilities.			
21	Access Point should 802.11 DFS certified			
	Access Point - Type 3			
1	Access Point shall be able to support Multigigabit Ethernet, support up to 5Gbps PHY speed using single Cat5e or above(Cat6, Cat6a, Cat7) cable			

2	Access Point shall provide modular expansion and upgradeable, while using the same AP mounting bracket			
3	Access Point shall be able to support 802.3at and UPoE for future modular scalability			
4	Access Point shall be able to scale Wave-2 MU-MIMO operation up to 160MHz channel bandwidth			
5	Access Point shall be able to double .11ac radio capacity by providing automatic selection of RF band between 2.4GHz and 5GHz in a single radio interface			
6	Access Point shall be able to support dedicated, dual-band security monitor mode AP, while simultaneously serves as 802.11ac Wave-2 AP			
7	In addition to 4x4:3SS Wave-2 .11ac radio, AP shall be able to support extra radio interface that support dynamic, auto-change between full-time dual-band monitoring and AP mode			
8	Access Point shall support Dual 5GHz radios allowing a total physical layer data rate of min. 5.2Gbps			
9	Hardware-Accelerated Deep Packet Inspection (Application Visibility) and Control to increase overall access point performance			
10	Access Point shall be able to leverage current Access Point mount kit and cable conduit			
11	Access Point shall be able to support .3ad LACP(LAG) using single IP address			
12	Must support minimum of 23dbm of transmit power in both 2.4Ghz and 5Ghz radios. And should follow the local regulatory Norms.			
13	Must support AP enforced load-balance between 2.4Ghz and 5Ghz band.			
14	Must incorporate radio resource management for power, channel and performance optimization			
15	Must have -97 dB or better Receiver Sensitivity.			
16	Must support Proactive Key Caching and/or other methods for Fast Secure Roaming.			
17	Must support Management Frame Protection.			
18	Should support locally-significant certificates on the APs using a Public Key Infrastructure (PKI).			
19	Access Points must support Hardware-based encrypted user data and management traffic between controller and Access point for better security.			

20	Must support the ability to serve clients and monitor the RF environment concurrently.			
21	Same model AP that serves clients must be able to be dedicated to monitoring the RF environment.			
22	Must be plenum-rated (UL2043).			
23	Must support 16 WLANs per AP for SSID deployment flexibility.			
24	Access Point Must continue serving clients when link to controller is down. It should also have option to authenticate user through Radius server directly from Access Point during link unavailability to controller.			
25	Must support telnet and/or SSH login to APs directly for troubleshooting flexibility.			
26 27	802.11e and WMM Must support QoS and Video Call Admission Control capabilities.			
28.	5 Years onsite comprehensive warranty			
29.	3 years comprehensive AMC			
30.	Buy-Back of existing LAN Infrastructure.			

ANNEXURE-II

Passive components

S.No.	General Specifications	Brand, Model No./Name	Brochure/ Literature attached (Y/N)	Compliance (Y/N)
1	OEM should be ISO 9001 ISO 14000 Certified.			
2	All networking passive material (Fiber and Copper) should be from one OEM make only.			
3	The OEM of passive components should provide UL/ETL certification for the full Cat 6A copper channel link (UL/ETL 4 connector test report) with at least 6dB NEXT head room for entire frequency range specified in ISO/IEC 11801 also the individual Copper components should be UL/ETL listed.			
4	The Cat 6A Cable should be complied with IEC 60332-3-22 features for environment safety.			
5	Cat 6 performance even when termination is within 15 meters thus ensuring eliminating short resonance for 4-connector channel (UL/ETL Report for 4 Connector need to be submitted).			
6	The Cat 6A Cable Should be ETL Verified and all passive components should be RoHS complied.			
7	Cat 6 Cable should have Publicly available online Repository to check the Genuity and to download factory test reports.			
8	The supplied passive product must have capability to Upgrade to Intelligent Cabling System without any downtime and they must have their own solution of Intelligence including software Reference with product data sheet must be provided.			
9	All the fiber cable should be Bend insensitive Multi mode			
10	All passive components should be RoHS complied. Declaration of – ROHS compliant should clearly be mentioned on data sheets of each Passive Components.			
11	The OEM of passive components to be quoted by the bidder should be present in India from at least past 10 years. (Details must be provided).			

	Item No. 1			
	CAT 6E, UTP Cable Box.			
12	Min. 4-pair, Cat 6A UTP Cable, Channel performance up to 250 MHz or more, Category-6 U/UTP with ETL 4 connector channel test report as per ISO/IEC 11801, 23 AWG bare solid copper.			
13	Meets ANSI/TIA 568-C.2 Category 6 specifications, Cat 6A U/UTP Solution, ETL 4 Connector channel Test report, Performance ETL Verified Certificate. RoHS Compliant.			
14	Cat 6A Cable shall support a minimum of 4 connector Channel with a minimum 6 dB guaranteed NEXT over and above the standard TIA 568 C.2 & 3rd Party Intertek (ETL) reports for verification of performance parameters for 6 dB NEXT.			
15	Worst Case Cable Skew: 30 nsec/100 meters @ 250 MHz, Characteristic Impendence: 100±6 Ù@ 1-250 MHz or as per ANSI/TIA 568 C.2, DC Resistance Max: 7.61 Ohms/100m, LSZH			
16	Sheath should be LSZH as per flame rating standard IEC60332-3-22, IEC 61034-2, IEC 60754-2, Operational Temp: -20º to 60º Celsius			
17	Insulation Material- Polyolefin, Separator Material-Polyolefin, PAIRS with Standard Color Code & length: 305 Mtrs. (1000 ft.) Cables should have Online Tracking Number to check the Genuity.			
	Item No. 2			
	Straight Jack Panel – Fully loaded (24 Port)			
18	Cat 6A U/UTP, 24-port loaded Modular Straight Jack Panel. loaded with 24 nos. UTP ports for PCB based IO Jacks, 1U size.			
19	110 IDC Termination 90/180 degree Punch, allowing wires between 22 – 26 AWG sizes. Modular, PCB based Unshielded Twisted pair, EIA/TIA 568-C-2, UL Listed, RoHS. Current Rating" 1.5A @20ºC or 68ºF			
	Cable Guide way to guide the cable on the rear side			
20	Jack Panel must be capable or supporting an upgrade to an Intelligent system			

	The patch panel type shall be a 1U panel capable of supporting 24 unshielded modular 8-pin connectors compliant with IEC 60603-7 while meeting the Channel Performance.			
	Item No. 03A			
	Cat 6 UTP Information Outlet			
21	Cat 6A UTP Jack PCB based Information Outlet (I/O) RJ45, TIA-568 C.2 Category-6. UL Listed, ETL Channel test report as per ISO/IEC 11801, ANSI/TIA 568 C.2.			
22	high-impact, flame-retardant, UL- RATED 94v 0 thermoplastic – ABS, Plug Insertion Life Min. 750 times as per IEC 60603-7			
23	Contact Resistance: 100 milli ohms; Insulation resistance 500 Mega ohms minimum ;Current Rating : 1.5 A (max) , Contact : 50m'' gold plating over 100 m'' nickel underplate)			
24	The information outlet must support 90-degree cable termination. Plug Retention Force: 133 N minimum between modular plug and jack, Meets and exceeds ISO 9001:2015, RoHS compliant			
	Item No. 03B			
	Dual/Four Port Faceplate			
25	Shall be available in 1 port, 2 port and 4 port square versions.			
26	General Specifications a) Color: White b) Width: 86.36 mm (3.4 in) c) Height: 86.36 mm (3.4 in) d) Depth: 13.72 mm (0.54 in)			
27	Faceplates shall accept all Modules for UTP, STP. Safety Standard UL/ETL Listed, RoHS Compliant.			
	Item No. 04,05			
	Cat 6A U/UTP Patch Cord 3 & 7 feet			
28	3& 7-Feet Cat 6A U/UTP Patch Cable, TIA-568C Category-6, UL-listed / ETL Channel test report as per ISO/IEC 11801, ANSI/TIA 568 C.2, RoHS Compliant.			
29	Patch cords shall be of stranded copper cable with UL/ETL Listed. Conductor			

	Material should be Tinned copper, Plugs shall be designed with an anti-snag latch.			
30	Patch cords sheath shall be LSZH as per IEC 60332-1, IEC 60754-2, IEC 61034-2, Operational Temp: -20º to 60º Celsius			
31	Plug Insertion Life Min. 750 times, Plug Retention Force, Min. 133 N			
	Item No. 6 **6 Core Multi Mode, OM4 Fiber**			
32	Shall be Multimode (OM4), Single Jacket, Corrugated Steel Tape Armor, Gel-free, Stranded Loose Tube Cable.			
33	Qualification Standards: ANSI/ICEA S-87-640, EN 187105 and Telcordia GR-20			
34	Regulatory Compliance: RoHS 2011/65/EU compliant			
	All OM4 Fiber strands shall be Bend-Insensitive Multimode Fiber			
35	No. of Fibers: 6			
	No. of Tubes: 1			
	No. of Rip cords: 2			
36	Dimensions			
	Cable Diameter			
	Cable Weight (less than or equal to): 110 kg/km			
37	Physical Specifications			
	Minimum Bend Radius, loaded: 17.5 cm			
	Minimum Bend Radius, unloaded: 12 cm			
	Tensile Load, long term, Max: 800 N			
	Tensile Load, short term, Max: 2700 N			
38	Environmental Specifications			
	Environmental Space: Aerial, lashed or Buried			
	Installation Temperature: -30 degree Celsius to +70 degree Celsius			
	Operating Temperature: -40 degree Celsius to +70 degree Celsius			
	Storage Temperature: -40 degree Celsius to +75 degree Celsius			
39	Mechanical Test Specifications			
	Compression: 44 N/mm (as per IEC 60794-1 E3)			
	Flex: 35 Cycles (as per IEC 60794-1 E6)			
	Impact: 2.94 N-m (as per IEC 60794-1 E4)			
	Water Penentration Test Method: 24 h (as per IEC 60794-1 F5)			
40	Optical Specifications			
	Attenuation, Maximum			

	1.00 dB/km @ 1300 nm			
	3.00 dB/km @ 850 nm			
	Index of Refraction			
	1.479 @ 1300 nm			
	1.483 @ 850 nm			
	Item No. 7 **12 Core Fiber LIU Loaded, Multi-Mode, OM4**			
41	12F, 1U, LC Style, MM-OM4, with Pigtail, loaded with Splice tray & Couplers & Splice Protectors (Fiber Optic LC style fully loaded Patch Panel (FOPP), Pigtails shall comply: Bend Insensitive and TIA- 492AAAD (OM4).			
42	Mn. 19" Rack Mount with min 12 nos. of MM-OM4, 50/125µ, Multimode, Low Smoke Zero Halogen (LSZH) Sheath Pigtails; RoHS Compliance.			
43	Metal/Alloy housing fully powder coated, Splice tray and cable spools, grooves for fixing splice protective sleeves (inbuilt or additionally). No. of OSP Cables for termination Minimum 2, The Patch Panel shall provide a minimum of four cable entry point			
44	Optical Performance of MM-OM4 Pigtails: Attenuation maximum: 1.00 dB/km @ 1300 nm & 3.00 dB/km @ 850 nm			
45	Pigtail cable Retention Strength, Max: 2.00 lb @ 90 degree, 5.00 lb @ 0 degree, Ferrule Geometry: Pre-radiused, Ferrule Material: Zirconia, Adapter Color: Beige, pigtail cable Qualification Standards ANSI/ICEA S-83-596 and Telcordia GR-409 Pigtails Should Complie to ANSI/TIA-568-C.3, ITU-G657.B-Bend insestive fiber,: IEC 60332-3			
46	The OEM of Passive components is required to provide the Product warranty and Performance warranty of minimum 20 years from the date of commissioning.			
	Item No. 8 **24 Core Fiber LIU Loaded, Multi-Mode, OM4**			
47	24F, 1U, LC Style, MM-OM4, with Pigtail, loaded with Splice tray & Couplers & Splice Protectors (Fiber Optic LC style fully loaded Patch Panel (FOPP), Pigtails shall comply: Bend Insensitive and TIA- 492AAAD (OM4).			
48	19" Rack Mount with min 24 nos. of MM-OM4, 50/125µ, Multimode, Low Smoke			

	Zero Halogen (LSZH) Sheath Pigtails; RoHS Compliance.			
49	Metal/Alloy housing fully powder coated, Splice tray and cable spools, grooves for fixing splice protective sleeves (inbuilt or additionally). No. of OSP Cables for termination Minimum 2, The Patch Panel shall provide a minimum of four cable entry point			
50	Optical Performance of MM-OM4 Pigtails: Attenuation maximum:			
51	1.00 dB/km @ 1300 nm & 3.00 dB/km @ 850 nm			
52	Pigtail cable Retention Strength, Max: 2.00 lb @ 90 degree, 5.00 lb @ 0 degree, Ferrule Geometry: Pre-radiused, Ferrule Material: Zirconia, Adapter Color: Beige, pigtail cable Qualification Standards ANSI/ICEA S-83-596 and Telcordia GR-409 Pigtails Should Complie to ANSI/TIA-568-C.3, ITU-G657.B-Bend insestive fiber,: IEC 60332-3			
53	The OEM of Passive components is required to provide the Product warranty and Performance warranty of minimum 20 years from the date of commissioning.			
	Item No.09 **LC-LC, MM OM4 Patch Cord**			
54	LC-LC Style Multimode-OM4, LSZH Sheath as per flame test method IEC 60332-3, IEC 60754-2, IEC 61034-2, UL 1666, Duplex Patch Cord, Bend Insensitive, Fiber Optic Patch Cable (LC-LC), 10 to 70 Feet. Long, 50/125 µ Duplex.			
55	RoHS compliant fiber optic patch cords shall include simplex or duplex LC, LC connectors on both ends.			
56	Patch Cord cable Shall comply ANSI/ICEA S-83-596 and Telcordia GR-409			
57	Optical Performance of Pigtails: Insertion Loss, maximum: 0.30 dB & Return Loss, minimum: 27.0 dB			
58	Patch Cord cable Retention Strength, Max: 4.40 lb @ 90-degree, 11.24 kg @ 0 degree, Ferrule Geometry: Pre-radiused, Ferrule Material: Zirconia, Optical Components Standard: ANSI/TIA-568-C.3			

	Item No. 10 **LC-LC, SM OS2 Patch Cord**			
59	LC-LC Style Single mode, LSZH Sheath as per flame test method IEC 60332-3, IEC 60754-2, IEC 61034-2, UL 1666, Duplex Patch Cord, Bend Insensitive, Fiber Optic Patch Cable (LC-LC), 10/15 Feet. Long, ISO/IEC-11801-OS2 9µ Duplex.			
60	RoHS compliant fiber optic patch cords shall include simplex or duplex LC, LC connectors on both ends.			
61	Patch Cord cable Shall comply ANSI/ICEA S-83-596 and Telcordia GR-409			
62	Optical Performance of Pigtails: Insertion Loss, maximum: 0.34 dB & Return Loss, minimum: 50.0 dB			
63	Patch Cord cable Retention Strength, Max: 4.40 lb @ 90 degree, 11.24 lb @ 0 degree, Ferrule Geometry: Pre-radiused, Ferrule Material: Zirconia, Optical Components Standard: ANSI/TIA-568-C.3			
64	The OEM of Passive components is required to provide the Product warranty and Performance warranty of minimum 20 years from the date of commissioning.			
65	5 Years Comprehensive Warranty, NBD support.			
66	3 Years Comprehensive AMC			
67	Buy Back of existing LAN components (Active and Passive)			

Form for Financial Bid: Active Components						ANNEXURE-III
Active Components						
S.No	**Item Description**	**Description**	**Qty**	**Unit Price**	**TAX/GST**	**Total Price**
1	**Core Switch**	24x 1/10/25G Gigabit Ethernet + 4x 40/100G Uplink as per detailed technical specifications	2			
2	**Access Switch - 24 Port**	24 nos. 10/100/1000 Base-T ports and additional 4 nos. SFP+ uplinks ports as per detailed technical specifications	10			
3	**Access Switch - 48 Port**	48 nos. 10/100/1000 Base-T ports and additional 4 nos. SFP+ uplinks ports as per detailed technical specifications	7			
4	**Access Switch - 24 Port POE+**	24 nos. 10/100/1000 Base-T POE+ ports and additional 4 nos. SFP+ uplinks ports as per detailed technical specifications	10			
5	**10G MM Transceivers**	10GBASE-SR SFP Module,	58			
6	**1G SM Transceivers**	1000BASE-LX/LH SFP transceiver module, MMF/SMF, 1310nm, DOM	2			
7	**1G Copper Transceivers**	1000BASE-T SFP transceiver module for Category 5 copper wire	10			
8	**10G Active Optical Cable**	40GBASE Active Optical Cable, 3m (QSFP to QSFP active optical cables)	2			
9	**25G Active Optical Cable**	25GBASE Active Optical SFP28 Cable, 5M	2			
10	**10G Base SFP+ Active Cable**	10GBASE-CU SFP+ Cable 1 Meter	14			
11	**AP Licenses for Existing NIC Wireless Controllers**	Access Point License	28			
12	**Access Point -Type - 1**	802.11ac W2 AP ; 4x4 Internal Ant; 2xGbE as per detailed technical specifications	10			
13	**Access Point -Type - 2**	802.11ac Wave-2,3X3 MU-MIMO as per detailed technical specifications	15			
14	**Access Point -Type - 3**	802.11ac W2 AP 4x4; Modular; mGig as per detailed technical specifications	3			
15.	**Comprehensive Annual Maintenance Contract (CAMC)**	Active Components of the proposed LAN network of MoES.	3 Years			
	Year wise cost breakup.	1st Year 2nd Year 3rd Year				

16.	**Buy-Back of existing LAN**	**Active and passive components** Price for buy-back of Active components of existing LAN Infra. (-)	List attached (Annexure -X)			
					Grand Total:	

Note: The detailed AP specifications are given in PART-C.
The Item No. 17 will be subtracted from the Grand Total.

ANNEXURE-III

FORM FOR FINANCIAL BID : PASSIVE COMPONENTS

S.No.	Items Description	QTY	Units	Unit Rates	TAX/GST	Total Price
1	UTP cable cat 6A 305 mtr Box	40	Rolls			
2	24 port Patch Panel cat 6A	13	Nos			
3	Information outlet cat 6A – Single (1 - port)	220	Nos			
4	Patch Cord Cat 6A, 1 Mtr	220	Nos			
5	Patch Cord Cat 6A, 2 Mtr	220	Nos			
6	Fiber Optic outdoor armoured cables (0M4) Multi loose tube,Multi-mode (MM) in meter(6 Core)	2800	Mtrs			
7	LIU, 6/12/24/48 fiber, 1U/2U Drawer style 19" rack Mount enclosure- LIU for 12 Core OFC.	12	Nos			
8	LIU, 6/12/24/48 fiber, 1U/2U Drawer style 19" rack Mount enclosure- LIU for 24 Core OFC.	3	Nos			
9	Optical Fiber pigtails MM/SM-LC type, 1 meter for all types	216	Nos			
10	Optical Fiber Patch Cord , MM , LC- LC, OM-4 – Length 3 M	58	Nos			
11	Optical Fiber Patch Cord , SM , LC-LC, - Length 3 Meter	2	Nos			
12	Supply of PVC conduit of OD size (Per meter) 25 MM	2100	Mtrs			
13	Supply of PVC conduit of OD size (Per meter) 32 MM	2600	Mtrs			
14	Supply of marked PVC duct of size(Per meter) 25X25 MM	400	Mtrs			
15	Supply of marked PVC duct of size(Per meter) 45X45 MM	50	Mtrs			
16	19 " Rack • Wall Mount , 530 mm depth, 12 U height, Front glass door (lockable, toughened 4mm), with all accessories	5	Nos			
17	Laying of UTP CAT 6A Cable	12200	Mtr			
18	Installation & Termination of information outlets (including termination of CAT 6A / CAT 6/ SIP cable on I/O)	220	Nos.			
19	Installation & termination of UTP cables on Patch Panel CAT 6A / CAT 6A/ STP with wire Manager	220	Nos.			
20	Performance testing of the laid UTP CAT 6A / CAT 6A /STP cable (Penta Scanner reports & documentation (per node)	220	Mtrs			
21	25 x 25 mm Installation of marked PVC duct of size (Per Meter)	400	Mtrs			
22	45 X 45 mm Installation of marked PVC duct of size (Per Meter)	50	Mtrs			
23	Installation of PVC conduit of OD size (Per Meter)-25 mm	2100	Mtrs			

24	Installation of PVC conduit of OD size (Per Meter)-32 mm	2600	Mtrs			
25	Indoor Laying of Fiber Cable (Per Meter)	2800	Mtrs			
26	Fusion splicing of SC / LC type pigtails	216	Nos			
27	Supply and installation of buffer tubing kit	216	Nos			
28	Removal/redressing of old UTP/Fiber / Coaxial / RS232/telephone cables per Mtr	2500	Mtr			
29	12 U wall Mount Rack installation	5	Nos			
30	3 Years Comprehensive AMC (CAMC)	3	Years			
	Year wise breakup	6^{th} Year 7^{th} Year 8^{th} Year				

Note: *If any of the above items are required to be reduced in number or to be increased in number, the amount on pro-rata basis will be decreased or increased. All UTP and Fiber cables will be charged as per the actual.*

Ministry Of Earth and Sciences

Detailed LAN Survey Report with damaged LAN ports due to partition and cable faulty.

Sl. No	Room No.	Name/Section	Total Nos. of LAN Connections	Total No. of working / faulty Nodes	Additional LAN connections required.	Unused/Damaged LAN ports.	Remarks
1	1		A-38	10	7	4	3 points connected with Hub.
			A-37				
			A-36				
			A-35				
			A-50				
			A-51				
			A-32				
			A-33				
			A-34				
			A-39				
2	Library			3	10	2	
			A-40				
			A-41				
			A-44				
3	2		A-29	3	3	1	
			A-30				
			A-31				
4	3		A-26		0	0	
5	Reception		A-84	4	2	0	
			A-42				
			AWIFI 1				
			AWIFI2				
6	5		A-22	2	1	1	
			A-23				

7	6		A-6	14	5	4	
			A-8				
			A-10				
			A-11				
			A-12				
			A-13				
			A-17				
			A-18				
			A-19				
			A-20				
			A-21				
			A-14				
			A-15				
			A-16				
8	7		A-04	6	3	4	
			A-05				
			A-06				
			A-07				
			A-08				
			A-09				
9	9		A-02	1	1	1	
10	10		B-16	6	2	0	
			B-17				
			B-18				
			B-19				
			B-20				
			A-3				
11	12		B-01	8	2	2	
			B-02				
			B-23				
			B-04				
			B-05				
			B-06				
			B-07				
			B-08				
12	14		B-21	4	2	0	
			B-22				
			B-23				
			B-24				
13	15		B-03	7	2	0	
			B-09				

			B-10				
			B-11				
			B-12				
			B-13				
			B-27				
14	Avani		B-14	2	5	1	
			B-15				
15	Basement		B-25	2	2	1	
			B-26				
16	106		C-25	6	2	2	
			C-26				
			C-28				
			C-29				
			C-31				
			C-32				
17	107		C-21	7	1	1	
			C-22				
			C-23				
			C-24				
			C-45				
			C-50				
			C-58				
18	108		C-15	5	2	1	
			C-16				
			C-17				
			C-18				
			C-19				
19	111		C-02	7	2	5	
			C-03				
			C-04				
			C-05				
			C-06				
			C-07				
			C-08				
20	105		C-33	5	2	2	
			C-34				
			C-35				
			C-36				
			C-37				

21	101		C-48	2	3	1	
			C-49				
22	104		C-38	5	3	2	
			C-39				
			C-40				
			C-41				
			C-42				
23	103		C-43	2	1	0	
			C-44				
24	102		C-46	2	2	0	
			C-47				
25	104 A		C-51	4	2	1	
			C-52				
			C-53				
			C-54				
26	Mahika Hall		C	2	4	0	
			C				
27	112		D-1	6	1	2	
			D-2				
			D-3				
			D-4				
			D-5				
			D-6				
28	Meghdoot Hall		D-7	5	2	2	
			D-8				
			D-9				
			D-10				
			D-11				
29	115		D-12	3	2	2	
			D-14				
			D-15				
30	116		D-17	6	4	5	
			D-18				
			D-19				
			D-20				
			D-21				
			D-22				

31	118		D-23	9	3	4	
			D-24				
			D-25				
			D-26				
			D-27				
			D-28				
			D-29				
			D-30				
			D-33				
32	210		E-01	8	3	4	
			E-02				
			E-03				
			E-04				
			E-05				
			E-06				
			E-07				
			E-08				
33	209		E-09	8	4	2	
			E-10				
			E-11				
			E-12				
			E-13				
			E-14				
			E-15				
			E-16				
34	207		E-25	10	2	2	
			E-26				
			E-27				
			E-28				
			E-29				
			E-30				
			E-31				
			E-32				
			E-34				
			E-76				
35	205		E-35	8	4	0	
			E-36				
			E-37				
			E-38				
			E-39				
			E-40				
			E-41				

			E-74				
36	204		E-42	7	2	0	
			E-43				
			E-44				
			E-45				
			E-46				
			E-47				
			E-75				
37	206		E-54	7	2	4	
			E-55				
			E-56				
			E-57				
			E-58				
			E-59				
			E-60				
38	203		E-61	2	1	0	
			E-73				
39	202		E-62	4	1	2	
			E-63				
			E-64				
			E-65				
40	201		E-67	8	4	7	
			E-68				
			E-69				
			E-70				
			E-71				
			E-72				
			unknown				
			unknown				
41	212		F-06	11	5	10	
			F-07				
			F-08				
			F-09				
			F-10				
			F-11				
			F-12				
			F-13				
			F-14				
			F-15				

			F-16				
42	211		F-01	11	1	2	
			F-02				
			F-03				
			F-04				
			F-05				
			F-53				
			F-54				
			F-56				
			F-57				
			F-58				
			F-61				
43	214		F-16	5	2	2	
			F-17				
			F-18				
			F-20				
			F-22				
44	215		F-13	3	2	2	
			F-14				
			F-15				
45	216		F-30	3	2	2	
			F-31				
			F-33				
46	217		F-24	7	1	1	
			F-25				
			F-26				
			F-27				
			F-28				
			F-29				
			Hidden				
47	218		F-32	4	2	1	
			F-34				
			F-59				
			F-60				
48	219		F-35	3	3	2	
			F-36				
			F-37				

49	220		F-38	3	3	2	
			F-39				
			F-40				
50	301		G-66	4	2	2	
			G-67				
			G-68				
			G-69				
51	302		G-63	3	2	3	
			G-64				
			G-65				
52	303		G-55	7	2	3	
			G-56				
			G-58				
			G-61				
			G-62				
			G-70				
			G-71				
53	304		G-35	16	10	6	Switch is being used as a hub
			G-37				
			G-38				
			G-39				
			G-40				
			G-41				
			G-42				
			G-44				
			304-1				
			304-2				
			304-3				
			304-4				
			304-6				
			304-8				
			304-9				
			304-10				
54	305		G-45	5	3	3	
			G-48				
			G-49				
			G-50				
			G-51				
55	306		G-32	3	2	0	
			G-33				

			Hidden				
56	307		G-25	7	2	5	
			G-26				
			G-27				
			G-28				
			G-29				
			G-30				
			G-31				
57	310		G-10	7	2	4	
			G-11				
			G-12				
			G-13				
			G-14				
			G-15				
58	311		G-01	9	3	6	
			G-02				
			G-03				
			G-04				
			G-05				
			G-06				
			G-07				
			G-08				
			G-09				
59	312		H-14	4	3	2	
			H-16				
			H-17				
			H-18				
60	314		H-01	12	5	11	
			H-02				
			H-03				
			H-04				
			H-06				
			H-7				
			H-08				
			H-09				
			H-10				
			H-11				
			H-12				
			H-13				
61	315		H-19	5	2	3	
			H-20				
			H-21				

			H-22				
			H-23				
62	316		H-34	6	2	3	
			H-35				
			H-36				
			H-37				
			H-38				
			H-39				
63	317		H-24	9	4	8	
			H-25				
			H-26				
			H-27				
			H-28				
			H-29				
			H-30				
			H-31				
			H-32				
64	318		H-73	5	1	2	
			H-74				
			H-75				
			H-76				
			Hidden				
65	319		H-40	7	3	6	
			H-41				
			H-42				
			H-43				
			H-44				
			H-45				
			H-46				
66	320		Hidden	1	1	0	
67	321		H-55	6	1	5	
			H-56				
			H-57				
			H-58				
			H-59				
			H-60				
68	Arnav Hall		H-75	3	4	0	
			H-76				
			Hidden				

69	404		I-2	7	5	7	
			I-3				
			I-4				
			I-5				
			I-6				
			I-7				
			I-8				
70	405		I-2	7	5	7	
			I-3				
			I-4				
			I-5				
			I-6				
			I-7				
			I-8				
71	406		J-1	1	2	1	
72	408		J-2	1	2	1	
73	409		J-4	1	2	1	
74	410		J-5	1	2	1	
75	411		J-6	1	2	1	
76	412		J-3	1	2	0	
77	414		J-1	1	2	1	
78	Cafeteria		I-37	2	0	2	
			I-38				
79	501		K-9	9	4	7	
			K-10				
			K-31				
			K-34				
			K-39				
			K-45				
			K-46				
			K-47				
			K-48				
80	502		K-29	6	3	6	
			K-30				
			K-32				
			K-33				

			K-37				
			K-38				
81	503		K-19	10	4	8	
			K-20				
			K-21				
			K-22				
			K-23				
			K-24				
			K-25				
			K-26				
			K-27				
			K-28				
82	504		K-08	8	1	3	
			K-10				
			K-11				
			K-13				
			K-14				
			K-15				
			K-16				
			K-17				
83	505		K-18	1	2	0	
84	506		K-01	9	2	4	
			K-02				
			K-03				
			K-04				
			K-05				
			K-06				
			K-07				
			K-50				
			K-51				
85	507		L-02	9	10	1	
			L-03				
			L-04				
			L-35				
			L-36				
			L-37				
			Hidden Port				
			Hidden Port				
			Hidden Port				

Note: Quantities mentioned in the schedule (Annexures) are tentative. They may vary as per actual requirements

	PART-C
Sr. No.	**Specifications for Access Points**
1	Access Point shall support 3x3 MIMO from both radio interface and MU-MIMO technology
2	Access Point shall support Console port that uses Standard Port (RJ-45) type connection
3	Access Point should have USB port for future requirement.
4	Must have at least 3 dBi Antenna gain on each radios
5	Must support minimum of 22dbm of transmit power in both 2.4Ghz and 5Ghz radios. And should follow the local regulatory Norms.
6	Must support AP enforced load-balance between 2.4Ghz and 5Ghz band.
7	Must incorporate radio resource management for power, channel and performance optimization
8	Must have -97 dB or better Receiver Sensitivity.
9	Must support Proactive Key Caching and/or other methods for Fast Secure Roaming.
10	Must support Management Frame Protection.
11	Should support locally-significant certificates on the APs using a Public Key Infrastructure (PKI).
12	Access Points must support Hardware-based encrypted user data and management traffic between controller and Access point for better security.
13	Must support the ability to serve clients and monitor the RF environment concurrently.
14	Same model AP that serves clients must be able to be dedicated to monitoring the RF environment.
15	Must be plenum-rated (UL2043).
16	Must support 16 WLANs per AP for SSID deployment flexibility.
17	Access Point Must continue serving clients when link to controller is down. It should also have option to authenticate user through Radius server directly from Access Point during link unavailability to controller.
18	Must support telnet and/or SSH login to APs directly for troubleshooting flexibility.
19	Must support Power over Ethernet and power injectors.
20	802.11e and WMM
21	Must support Reliable Multicast to Unicast conversion to maintain video quality at AP level
22	Must support QoS and Video Call Admission Control capabilities.
23	Access Point should 802.11 DFS certified

ANNEXURE-V

Check List for Technical Bid Evaluation:

Sl. No.	Item/Description	Yes/No	Page nos. in the bid document
I.	Manufacture Authorization Letter for Active and Passive network components for Local Area Networking		
II.	Original Draft/DD for EMD in favor of DDO, Ministry of Earth Sciences, New Delhi		
III.	Technical Bid Compliance sheet duly signed and stamped with Brand/Model and detailed specifications of the items. (Annexure-II)		
IV.	Acceptance of Financial Bid Format (Annexure-III) duly signed and stamped.		
V.	Bid Securing Declaration Format should be attached as per the Annexure provided.		
VI	Documents for similar experience of min. 2 Govt organizations.		
VII	Financial Statement/Income Tax Statement of Last 3 Years		
VIII	Acceptance Letter – Please sign each page of the tender document in order to accept/agree all the terms and conditions mentioned in the tender document. ***This will become part of the agreement to be signed by the Ministry with the successful bidder.***		
IX	The average turnover of the bidder should be 10 Cr in the last 3 financial years.		

Note:

- All bidders must supply details of Network being provided along with Network/Circuit diagram etc.
- Technically qualified bidder shall be asked to give a presentation before a Technical Committee of MoES. Suggestion given will have to be incorporated in the bid.

ANNEXURE-VII

MANUFACTURER AUTHORISATION LETTER

FOR

Active and Passive network equipment's for Local Area Networking

To,

The Director,
Ministry of Earth Sciences
Prithvi Bhawan, Lodhi Road
New Delhi - 110003

Subject: Manufacturer authorization towards tender enquiry No.……

Dear Sir,

We, M/s _____ having registered office _____by virtue of being **Manufacturer of Active and Passive network equipment's for Local Area Networking** hereby authorize M**/s ……. (Bidder Name)**, having their office at... **(Bidder office address)...** is an authorized reseller of **(OEM) Active and Passive network equipment's for Local Area Networking** in India and is entitled to submit quote, negotiate, supply, install and provide after sales support for a period of 5 years for our range of products quoted by them to meet the above mentioned tender requirements.

M/s_____within the scope of requirement as per the tender mentioned above through its authorized partner M/s ……shall provide supply, installation support & product warranty services in the Ministry of Earth Sciences as per tender clause.

The undersigned is authorized to issue such authorization on behalf of M/s _____.

You're sincerely,

For M/s _____

Signature

Company seal

Name:_____
Designation: _____
Date:_____

ANNEXURE - VIII

BID SECURING DECLARATION FORMAT

To,

The Director,
Ministry of Earth Sciences
Prithvi Bhawan, Lodhi Road
New Delhi - 110003

Subject: Bid Securing Declaration Format towards tender enquiry No.……

Dear Sir,

On behalf of ……., an AUTHORIZED DEALER/DISTRIBUTOR/SYSTEM INTEGRATOR, we hereby submit a bid securing declaration accepting that if we withdraw or modify our Bids during the period of validity, or if we are awarded the contract and we fail to sign the contract, or to submit a performance security before the deadline defined in the bid document, we can be suspended for a period of two years from being eligible to submit Bids for contracts with this Ministry.

You're sincerely,

For M/s _____

Signature

Company seal

Name:_____
Designation:_____
Date:_____

ANNEXURE-IX

PERFORMANCE SECURITY BOND FORM

(To be stamped in accordance with Stamp Act) 1. In consideration of the President of India (hereinafter called 'the Government') having agreed to exempt ---------- (hereinafter called 'the said Contractor(s)' from the demand, under the terms and conditions of an agreement / (Purchase Order) No. ---------- ------- Dated ----------made between ---------- and ---------- ---------- -------- for the supply of----------(hereinafter called 'the said Agreement'), of performance security for the due fulfilment by the said Contractor(s) of the terms and conditions contained in the said Agreement, on Production of a bank guarantee for ---------- ---------- we, (Name of the bank) ---------- (hereinafter referred to as 'the Bank') at the request of ----------contractor(s) do hereby undertake to pay to the O/o DDG TERM HP, Shimla an amount not exceeding ---------- ---------- ---------- against any loss or damage caused to or suffered or would be caused to or suffered by the O/o DDG TERM HP, Shimla by reason of any breach by the said Contractor(S) of any of the terms or conditions contained in the said Agreement.

2. We (Name of the bank) ---------- do hereby undertake to pay the amount due and payable under this guarantee without any demur, merely on a demand from the O/o DDG TERM HP stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the O/o DDG TERM HP, Shimla by reason of the contractor(s) failure to perform the said Agreement. Any such demand made on the bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee where the decision of the O/o DDG TERM HP, Shimla in these counts shall be final and binding on the bank. However, our Liability under this guarantee shall be restricted to an amount not exceeding ----------.

3. We undertake to pay to the O/o DDG TERM HP, Shimla any money so demanded notwithstanding any dispute or disputes raised by the contractor(s)/ supplier(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 valid discharge of our liability for payment there under and the contractor(s)/ supplier(s) shall have no claim against us for making such payment.

4. We (name of the bank) ---------- ----- further agree that the guarantee herein contained shall remain in full force and effect during for a period of sixty days beyond the date of completion of all contractual obligations of the contractor including warranty obligations. And that it shall continue to be enforceable till all the dues of the O/o DDG TERM HP, Shimla under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till ---------- ---------- (O/o DDG TERM HP, Shimla) certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said contractor(S) and accordingly discharge this guarantee.

5. We (Name of the bank)----------further agree with the O/o DDG TERM HP, Shimla

that the O/o DDG TERM HP, Shimla shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary and of the terms and conditions of the said Agreement or to extend time of performance by the said 552/TERM- HP/Server/Tender/2014-15/18 30 contract(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the O/o DDG TERM HP, Shimla Against and said Contract(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 Contract(s) or for any forbearance, act or omission on the part of the O/o DDG TERM HP, Shimla or any indulgence by the O/o DDG TERM HP, Shimla to the said contract(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)/supplier(s).

7. We (name of the bank) ---------- lastly undertake not to revoke this guarantee during its currency except with the previous consent of the O/o DDG TERM HP, Shimla in writing. Dated the ---------- day of ----------, Two thousand Thirteen only. For ---------- ---------- (Indicate the name of the bank). Witness..... Tele No.(s):- ..... Signature..... FAX No.(s):- ..... Address..... . E-Mail Address:- .....

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ANNEXURE-X

List of Active and Passive components of existing LAN

Sl No.	Item Description	Quantity	Remarks
1.	Cisco L2 Switch 2960 Series	13 Nos.	2960
2.	Cisco L3 Switch 3700 Series	1 Nos.	3750
3	Cisco L3 Switch 3500 Series	1 Nos.	3560
3.	Ethernet Hub	3 Nos.	(2 Nos. Unmanaged Switch)
4.	Jack Panel	10 Nos.	
5.	9U/12U Rack	5 Nos.	The remaining Rack will be used.
6.	LIU	10 Nos.	
7.	Fiber optic cables (OM2)	1000 Mtr. (approx..)	
8.	I/O Box		Faulty items
9.	Cisco WiFi Controller with adapter	1 No.	
10.	Cisco Access Points with adapter	5 Nos.	
11.	Patch Cards	100 Nos.	
12.	UTP cables		Faulty items

ANNEXURE-XI

CONTRACT AGREEMENT

CONTRACT AGREEMENT No. MoES/05/13/2019-IT.

This Agreement made on day of , 2020 between the President of India, acting Sh. Naveen Kumar Shah, Director, in the Ministry of Earth Sciences, Government of India (hereinafter referred to MoES) , (Which expression shall include its administrators, successors, executors) on the one part and M/s Bidder Name (hereinafter referred to as contractor) which expression shall include its administrators, successors, executers and permitted assigns on the other part.

Whereas, MoES is desirous of getting the work of Revamping of Existing LAN Infrastructure Annual Service and Maintenance Contract for a period from _____ to _____of Active and Passive Network Components installed at its headquarters in Ministry of Earth Sciences, Govt. of India, Prithvi Bhawan, Lodi Road, New Delhi-110003 as per terms and conditions mentioned in the Ministry of Earth Science letter No. MoES/05/13/2019-IT dated _____.

NOW THEREFORE THIS DEED WITNESSETH AS UNDER

MoES has awarded contract to M/s _____ on the terms and conditions mentioned in the Ministry of Earth Science letter No. MoES/05/13/2019-IT dated _____ and the documents referred to therein. The award has taken effect from _____ for 8 Years including Warranty and AMC.

The above contract documents are serially numbered from 1 to 3 and are initialled by both the parties through their representatives. The total amount payable to the contractor will be Rs. _____/- (plus taxes).

All the aforesaid contract documents shall from an integral part of this agreement. The contract shall be performed by the contractor strictly and faithfully in accordance with the terms of the agreement. Any modification of the agreement shall be effected only by a written instrument signed by the authorized representatives of both the parties.

The following are some of the major responsibilities of the contractor as per the tender document.

Clause 39: DELIVERY: Delivery of the goods and documents shall be made by the Supplier in accordance with the terms specified by the Purchaser in its Schedule of Requirements and conditions of the tender document and the goods shall remain at the risk of the Supplier until delivery has been completed. The Supplier should supply the items within 60 days from the date of issue of the final purchase order failing which the MoES may apply the clause Liquidated Damages and finally cancel the order and forfeit the performance security.

Clause 25.1: Performance Security: Upon issue of a Letter of Award (LoA) by MoES, the Successful Applicant shall be required to furnish an unconditional and irrevocable Performance Security in the form of a Performance Bank Guarantee (PBG) in the prescribed format **within a period of 15 working days after issue of Award Letter**. The PBG shall be for an amount of 10% of its financial proposal value and should be in favor of DDO, Ministry of Earth Sciences, payable at New Delhi. The Performance Security shall be valid for period of contract, which may be extended

appropriately such that it remains valid until one year beyond completion of the contract. The Performance Security shall be valid initially for **Eight years** including AMC period which can be extended appropriately such that it remains valid until one year beyond completion of the contract.

Clause 35: Payment Terms- 40% of the Payment will be made against the delivery of Bill of materials and equal amounts against Bank Guarantee. The rest of the payment shall be made on successful completion of installation of Active and Passive network components for Local Area Networking to achieve end-to-end connectivity. The satisfactory completion certificate should be obtained from the IT/Gen. Admin Section for releasing rest of the payment.

The payment or part payment will be made subject to submission of Inspection Report/Certificate, Invoice duly certified, authorized or any other relevant documents as required by the ministry during the payment.

Payment shall be made by MoES for the services rendered by the Service Provider, as per the provisions prescribed in the Terms of Reference

(b) The schedule of payment shall be as specified in the tender.

(b) The service provider shall be liable for the payment of all taxes and levies prevalent and/or imposed during the period of contract agreement and indemnify MoES against any such claims.

The rest of the payment shall be released only after the whole work has been completed and on its working satisfactorily.

Clause: 40: WARRANTY: 5 Years Comprehensive Onsite Warranty for Active and Passive components as mentioned in the Price Bid (from the date of commissioning of system).

40.1 Replacement or repair under warranty clause shall be made by the supplier free of charges at site including freight, insurance and other incidental charges.

40.2 5 years onsite Warranty shall be provided to all the Active and Passive components of the network as mentioned in the tender document. After five years warranty period, 3 years of Comprehensive AMC (CAMC) shall be provided to the entire LAN network solution as mentioned. The cost of the CAMC should be given separately in the Financial Bid with year wise breakup. The payment for CAMC will be released after completion of every quarter after getting satisfactory service report/certificate from the IT Division/Gen. Admin. Section.

40.3 Integrated solution, supply, installation, testing and commissioning of Revamping of existing LAN Infrastructure along with 5 years On Site Warranty consisting of 24x5 Next Business (NBD) support along with 3 years Comprehensive Annual Maintenance Contract (CAMC) for operation and monitoring of entire LAN infrastructure of the ministry. The selected firm should provide quarterly preventive maintenance report during the AMC period for releasing the payment.

Clause 41: PENALTY: During the CAMC period, any **active or passive components of LAN Network** setup is found defective or in case does not work for any reason, the AMC contractor or successful bidder should attend the call within six working hours from the time of reporting through e-mail/ telephone / fax etc. and rectify the problem within Next Business Day (NBD) or 24 Hrs, If any spare parts is to be replaced/repaired, it must be carried out within 7 days from the date of registering the complaint, failing which penalty of Rs. 1000 per day will be imposed subject to maximum period

of 30 days. The complaint is not attended or could not resolve the issues beyond 30 days, the CAMC will be cancelled and the performance security will be forfeited.

Clause 43: Ownership of Material: Any studies report or other material, data or information otherwise prepared by the contractor for MoES under the contract will remain the property of Ministry of Earth Sciences.

Clause 49: LIQUIDATED DAMAGES: The date of delivery and installation stipulated in the acceptance of the tender should be deemed to be the essence of the contract and delivery must be completed no later than 60 days from the award of contract. Extension will not be granted except in exceptional circumstances. Should, however, deliveries be made after expiry of the contracted delivery period, without prior concurrence of the purchaser and be accepted by the consignee, such delivery will not deprive the purchaser of his right to recover liquidated damage. If the supplier fails to complete the entire work including delivery, installation, making operational the entire LAN setup in MoES within the stipulated time of 3 Months, penalty @ 0.5% per week of delay will be imposed subject to a maximum of 10% (per cent) of the value of delayed goods. The LD cannot exceed the amount stipulated in the contract.

Provided, also that if the contract is terminated under this clause, the MoES shall be at liberty to take over from the Supplier at a price to be fixed by the purchaser, which shall be final, all unused, undamaged and acceptable materials, bought out components and stores in course of manufacture which may be in possession of the Supplier at the time of such termination or such portion thereof as the purchaser may deem fit, except such materials, bought out components and stores as the Supplier may with the concurrence of the MoES elect to retain.

Clause 50: Arbritration- All disputes or differences arising out of or in connection with the contract shall be settled by bilateral discussions. If any dispute cannot be settled by mutual discussions within thirty days an independent arbitrator shall be appointed on consent of both parties. The arbitration proceedings shall be held under the provisions of the Arbitration and Conciliation Act 1996 and any of its subsequent amendments. The arbitration proceedings shall be in English and the venue of arbitration shall be Delhi.

Clause 51: Force Majeure- Neither party shall in any event be liable for any failure to perform its obligations under this Agreement due to any events beyond the reasonable control of either party or any events of force majeure. The decision of MoES shall be final in this regard.

Clause 54: Performance Security- The Lowest (L1) or selected bidder shall furnish performance security in the form of an account payee demand draft, fixed deposit receipt from a commercial bank, bank guarantee issued/confirmed from any of the commercial bank in India in an acceptable form **drawn in favor of DDO, MoES and payable at New Delhi** for an amount equal to 10% of the value of Contract Agreement within 10 days from the date of issue of Letter of Acceptance.

54.4 The proceeds of the performance security shall be payable to the ministry as compensation for any loss resulting from the supplier's failure to complete its obligations under the Contract.

54.5 The Performance Security Bond shall be in the form of Bank Guarantee issued by a Commercial Bank and in the form provided in 'Annexure-IV' of this Bid Document or through Fixed Deposit Receipt (FDR).

54.6 The Performance Security Bond will be discharged by the ministry after a period of sixty days beyond completion of the supplier's performance including warranty and AMC obligations under the contract.

All terms and conditions mentioned in the Tender No. MoES/05/13/2019-IT are also valid in the contract agreement.

It is specifically agreed by and between the parties that all the differences or disputes arising out of the agreement or touching the subject matter of the agreement shall be decided by process of settlement & arbitration as per provision of the Indian Arbitration Act and Delhi shall have exclusive jurisdiction over the same.

Notice of default given by either party to the other party under the agreement shall be in writing and shall be deemed to have been duly and properly served upon the party hereto if delivered against acknowledgement duly addressed to the signatories at the addresses mentioned herein below. This is a supply, maintenance and operation contract, which includes supply, installation, testing and commissioning and maintenance of Active and Passive network components for Local Area Networking in Ministry of Earth Sciences at Prithvi Bhawan, Lodhi Road, New Delhi with skilled and unskilled manpower as per the condition of the contract.

IN WITNESS HEREOF the Parties through their authorized representative have executed these present (execution whereof has been approved by the competent authorities of both the parties) on day, month and year first mentioned in Delhi.

For and on behalf of **M/S _____** Witness	For and on behalf of **Ministry of Earth Sciences**, New Building I.M.D. Complex, Lodhi Road, New Delhi-110003
Witness	