

**INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE**  
**2A & 2B, Raja S.C. Mullick Road, Jadavpur, Kolkata-700032**

**NIT No.: IACS/CC/TSD/2018-19/2**

**Date: 09/04/2018**

Sealed tender in two bids system (technical bid and price bid) is invited from bonafide, resourceful and eligible manufacturer/exclusive distributor/vendors for '**Supply, installation, testing and commissioning of 2 Nos. of L2 managed Network Switches**'.

Part-I (Technical Bid) of the tender should contain technical specifications in detail as well as commercial terms and conditions. Part-II (Price Bid) should clearly indicate group-wise price, if needed, as mentioned in the technical bid. The Technical Bid and Price Bid are to be submitted in separately sealed envelopes, distinctly marked accordingly and both to be put inside another envelop, that should be sealed and superscribed with tender notice no. and due date. The bidders may submit bids duly signed in their own letterheads.

Completed tender bids should reach the office of the **Registrar, Indian Association for the Cultivation of Science (IACS), 2A & 2B Raja S. C. Mullick Road, Jadavpur, Kolkata-700032** on or before the scheduled date and time specified below:

|                                         |                                                                                                                                                                                                                  |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tender Notice No.                       | <b>NIT No. IACS/CC/TSD/2018-19/ 2</b><br><b>Date : 09-04-2018</b>                                                                                                                                                |
| Last date and time of submitting tender | 30th April, 2018 at 2.00 P.M. at Dispatch Section                                                                                                                                                                |
| Date and time of opening tender         | 30th April, 2018 at 3.30 P.M.                                                                                                                                                                                    |
| Place of opening tender                 | Computer Centre of IACS                                                                                                                                                                                          |
| Date and time of opening of Price Bid   | The Price Bids of the bidders qualifying the technical bid will only be opened, the date of which will be intimated to the short-listed bidders at their email addresses. The rest of the bids will be rejected. |
| Contact                                 | Email: <a href="mailto:ccsd@iacs.res.in">ccsd@iacs.res.in</a><br>Tel.+91 33 2473 4971 [Ext. 1210]                                                                                                                |

The technical bids will be opened first to judge/evaluate the technical specifications of the said switches and thereafter the price bids of only technically qualified bidders will be opened.

**Technical Bid Evaluation:** The Technical Bids will be evaluated in the presence of the representatives of intending bidders who will be able to clarify technical aspects of their bids, if any, required by the Technical Evaluation Team.

**Opening of price-bid:** The Price Bids of the bidders qualifying the technical bid will only be opened, the date of which will be intimated to the short-listed bidders at their email addresses. The rest of the bids will be rejected.

Please note that IACS will not provide any accommodation or reimburse any expenses to any of the bidders for attending opening of technical bid.

Quotations received incomplete or beyond the stipulated time will be summarily rejected.

Bidders should submit their past experience for supplying and successful installation of similar switches to other research Institutes/Universities/other organizations in India. Please provide documentary proofs of such successful installation and supportive documents that the switches are running successfully.

## **1. TECHNICAL BID**

The technical bid should contain technical specifications and should be kept in a separate sealed envelope duly superscribed as 'TECHNICAL BID' on the outer cover of the envelope as already detailed above. **It should be clearly mentioned on the envelope as "Technical Specification for Network Switches".**

### **1.1. Bill of materials**

#### **Active Material :**

| <b>Description</b>                                                         | <b>Quantity No</b> |
|----------------------------------------------------------------------------|--------------------|
| Layer 2 Switch Managed 48 port 10/100/1000 Mbps with 4 X 1G SFP Port (PoE) | 2 Nos.             |
| Power cable (India)                                                        | 2 Nos.             |

### **1.2 Technical specification:**

#### **● Layer 2 Switch Managed 48 port 10/100/1000 Mbps with 4 X 1G SFP Port (PoE)**

|                                                                                                    |
|----------------------------------------------------------------------------------------------------|
| <b>General Features</b>                                                                            |
| The switch should have minimum 48 x 10/100/1000 Base-T POE/POE+ Ports & 4 X 1000 Base-X SFP slots. |
| Future support for Redundant Power supply                                                          |

|                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------|
| Should have fan for proper cooling.                                                                                                |
| PoE power supply should be 370 watt                                                                                                |
| <b>Performance</b>                                                                                                                 |
| At least 200 Gbps switching bandwidth                                                                                              |
| Forwarding rate – At least <b>130</b> Mpps.                                                                                        |
| Configurable at least 16000 MAC addresses                                                                                          |
| The switch should support stacking with 80 Gbps Stacking bandwidth to stack upto 8 switches into a single virtual switch.          |
| At least DRAM 512 MB and 128 MB Flash                                                                                              |
| <b>Layer-2 Features</b>                                                                                                            |
| IEEE 802.1Q VLAN encapsulation. At least 1000 VLANs should be supported. Support for 4000 VLAN IDs.                                |
| Centralized VLAN Management. VLANs created on the Core Switches should be propagated automatically.                                |
| Spanning-tree root guard feature to prevent other edge switches becoming the root bridge.                                          |
| Link Aggregation Protocol (LACP)                                                                                                   |
| <b>Network Security Features</b>                                                                                                   |
| IEEE 802.1x to allow dynamic, port-based security, providing user authentication.                                                  |
| Port-based ACLs for Layer 2 interfaces to allow application of security policies on individual switch ports.                       |
| SSHv2 and SNMPv3 to provide network security by encrypting administrator traffic during Telnet and SNMP sessions.                  |
| RADIUS authentication to enable centralized control of the switch and restrict unauthorized users from altering the configuration. |

|                                                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Multilevel security on console access to prevent unauthorized users from altering the switch configuration using local database or through an external AAA Server.        |
| Should support minimum 400 ACL entries                                                                                                                                    |
| <b>Quality of Service (QoS) &amp; Multicast</b>                                                                                                                           |
| Shaped Round Robin (SRR) scheduling and Weighted Tail Drop (WTD) congestion avoidance.                                                                                    |
| 2000 IPv4 & IPv6 Unicast Direct Routes                                                                                                                                    |
| 1000 Multicast Groups                                                                                                                                                     |
| <b>Management</b>                                                                                                                                                         |
| Command Line Interface (CLI) support for configuration & troubleshooting purposes.                                                                                        |
| SNMP v1, v2c, and v3 and Telnet interface support delivers comprehensive in-band management, and a CLI-based management console provides detailed out-of-band management. |

## 2. PRICE BID

The financial bid indicating (item-wise) price for the item(s) mentioned in the technical bid should be kept in a separate sealed envelope duly super scribed as 'PRICE BID' on the outer cover of the envelop as already detailed above. Price bids of only technically qualified bidders will be opened and they will be intimated the date and time of the opening of price bid at their e-mail ids. Rest of the bidders will stand rejected.

Servicing facility within India is a must while service engineer stationed at Kolkata will be preferred.

A list of other places where the instrument has been installed should also be provided. A compliance table (see below) must be prepared and submitted along with the technical bid.

| Sr. No |                           | Tender specification | Your offered instrument specification | Extent of compliance |
|--------|---------------------------|----------------------|---------------------------------------|----------------------|
| 1      | 48 port managed L2 Switch |                      |                                       |                      |

| Sr. No     | Item                | Quantity | Make/model | Base price | Total Price(Without GST) | GST @ | GST Value | Total price with GST |
|------------|---------------------|----------|------------|------------|--------------------------|-------|-----------|----------------------|
| 1          | L2 Switch           | 2 Nos.   |            |            |                          |       |           |                      |
| 2          | Power cable (India) | 2 Nos.   |            |            |                          |       |           |                      |
| Total GST: |                     |          |            |            | Total Price:             |       |           |                      |

### 3. SCOPE OF WORK:

The switches will replace the existing Cisco make switches in the Main Building of IACS. The L2 switches will be used as Access switches and wireless APs (Cisco Aironet 1242) will also be connected to them. In future 802.11 g/n/ac complied APs will be connected. These L2 switches will be connected through CAT6A with both L3 switches using Spanning Tree Protocol. The schematic network diagram should be consulted for clarification.

### 4. WARRANTY:

- i. The Comprehensive Warranty shall be for a period of 3 years from the date of satisfactory installation, testing, commissioning and handing over the equipment which covered under warranty in working order. During the Warranty period the replacement of any part(s) of the equipment or rectification of defect of product will be free of cost.
- ii. If, the tenderer is required to replace the rejected equipment and/ or other articles, he will replace them forthwith, but not later than a period of 14 (fourteen) days from the date of rejection. The tenderer shall bear all cost of such replacement, including freight, if any, of such replacement or repaired equipment and/ or other articles but without being entailed to any extra payment on that or any other account.
- iii. Training to be given to IACS staff for operation & maintenance, troubleshooting, user level training pertaining to system after successful commissioning.
- iv. Vendor shall make necessary arrangements for keeping the sufficient spares at site to minimize the down time.
- v. Software updates released by the OEM should be installed by the vendor free of cost within the warranty period.
- vi. Warranty should be offered directly by the OEM.
- vii. Single point of contact for all communication related with after sales and support.

### 5. CERTIFICATIONS:

Switch OEM should be in the Gartner's Leaders & Challengers quadrant for Wired LAN Access infrastructure.

## **6. BID SECURITY:**

- a. An Account payee Demand Draft/Pay Order of Nationalized Bank for Rs. 8, 000/- (Rupees Eight thousand only) drawn in favour of “Indian Association for the Cultivation of Science (State Bank of India, Jadavpur University Branch, A/C No. 11079699211, IFSC: SBIN000093, MICR Code: 700002048)” is to be furnished by the bidders except those who are registered with the Central Purchase Organizations, National Small Industries Corporation or the concerned Ministry or Department, as Bid Security money or Earnest Money Deposit (EMD). Alternatively, the Bidder shall have the option to furnish the EMD in the format of Bank Guarantee (BG).
- b. The Demand Draft for the Bid-Security should have at least about 90 (ninety) days validity period of opening of the bids.
- c. In case of non-award of the work the Bid Security money would be returned to the unsuccessful Bidders.

## **7. PERFORMANCE SECURITY:**

An Account Payee Demand Draft on any commercial bank of India of 10% of the order value in the name of “Indian Association for the Cultivation of Science” is to be furnished by the successful bidder as Performance security. Performance Security may be furnished in the form of Fixed Deposit Receipt or Bank Guarantee from a Commercial Bank. Performance security money should remain valid for a period of 60 days beyond the date of completion of all contractual obligations of the supplier including warranty obligations. Bid security money or EMD will be refunded to successful bidder on receipt of the Performance security money.

## **8. TERMS OF PAYMENT:**

All rates should be quoted in INR only. Payment will be made 100% on successful installation of the switches and on issue of Completion Certificate. Partial payment against supply within scheduled delivery period will not be admissible.

## **9. DOCUMENT**

1. The model number, make and a printed literature of the product should be submitted positively.
2. Manufacturers / exclusive distributors / vendors should have history of supplying this type of switches to this or other scientific organizations. Availability of a list in this regard would be preferred.
3. Bidder should submit their past experience for supplying and successful installation of similar units to other research Institute/Universities/other organization in India. Please provide documentary proofs of such successful installation and project completion.
4. The tender should accompany a compliance chart.
5. Income Tax Return ( for the last 3 years)
6. Audited Balance Sheet ( for the last 3 years)
7. PAN Card copy

8. GST Certificate
9. Authorized dealership certificate should be provided in case of principal manufacturing company is not quoting directly.
10. A list of clients where L3/L2 Switch has been installed should also be provided
11. Documentary proof of Servicing facility and service engineer stationed at Kolkata.
12. Documentary proof of the vendor/bidder working in this field for at least last 3 years
13. Annexure-I in letter head with company seal and sign

## **10. GENERAL INSTRUCTIONS**

1. Validity of tender: Tender submitted should remain valid for at least six months from the date of opening the tender. Validity beyond six months from the date of opening of the tender shall be lapsed by mutual consent.
2. Incomplete and conditional tenders as well as tenders received after the due date will be summarily rejected without assigning any reasons thereof.
3. At any time prior to the bid due date, IACS may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder during pre-bid meeting, modify the bidding documents. The amendment(s) will be notified on the institute website. Prospective bidders are advised to occasionally visit the website ([www.iacs.res.in](http://www.iacs.res.in)) for any amendment.
4. A maximum of 2 representatives per bidder, duly authorized, may be allowed to attend the pre-bid meeting.
5. Installation/Demonstration/Application training at site: Installation & user training at IACS, free of cost by the supplier.
6. Service facility: In Kolkata, supplier should mention their details of service setup and man powers that are responsible for after sales support. Response time should be within 24 hrs.
7. Proposed delivery schedule should be mentioned clearly.
8. Guarantee certificate, users manuals etc. are to be handed over to the user after successful commissioning of the system.
9. In the event of date being declared a closed holiday for purchaser's office, the due date for submission of bids and opening of the technical bids will be the following working day at the appointed time.
10. In case of any dispute, the decision of IACS authority shall be final and binding on the bidders.
11. Once the pre-bid meeting is over and issues are clarified, no query or objection or complain shall be entertained in connection with the tender. Absence of any vendors in pre-bid conference shall not be considered as justification for making query or objection thereto. Also, non-attendance in the pre-bid meeting is not a disqualification for participating in the tender process.
12. For any clarification regarding technical specifications, information etc., please send your queries to Dr. Swapan Deoghuria ([ccsd@iacs.res.in](mailto:ccsd@iacs.res.in)).
13. The authority of IACS reserves the right to reject any or all of the tenders received without assigning any reason thereof.

**Acting Registrar**