iHub Anubhuti-
IIITD Foundation

TENDER FOR PURCHASE OF ACTIVE NETWORKING DEVICES FOR MCC

FOR LAB WORK OF THE iHUB ANUBHUTI-IIITD FOUNDATION AT OKHLA PHASE-III, NEW DELHI-110020

(Tender no.: iHub-Anubhuti/11/MCC/2023-24)

INVITATION FOR BIDS

1. iHUB ANUBHUTI-IIITD FOUNDATION (hereafter referred to as iHub-Anubhuti), is a Section-8, Not-for-profit Company under a National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS) of the Government of India established by Department of Science and Technology (DST) at Indraprastha Institute of Information Technology Delhi (IIIT-Delhi). It is a Technology Innovation Hub in the technology vertical "Cognitive Computing & Social Sensing" with a focus area on "Healthcare", "Education", and "Legal Information Systems".

2. iHub-Anubhuti invites sealed bids under two bid systems for the purchase of Networking devices (as per the specification mentioned under Scope of Work below) for its campus at Okhla Phase-III New Delhi-110020.

3. The last date for submission of bids is 03 July 2023, at 03:00 PM. The Tender Document should be submitted in two separate envelopes Technical and financial.

   The Tender Document should be addressed to:
   Sr. Manager,
   iHub Anubhuti-IIITD Foundation, 5th Floor, B-wing, Old Academics,
   Indraprastha Institute of Information Technology, Delhi Okhla Phase-III
   (Behind Govind Puri Metro Station) New Delhi - 110020.

4. The Technical bids shall be opened on the same day i.e. 03 July 2023, at 3:30 PM.

SCOPE OF WORK

a. Supply and installation of 24 Port Access Switch (Non-PoE)(Quantity: 01) as per the description below:

S.No	24 Port Access Switch (Non-PoE)(Quantity:1)
1	**Hardware Specifications**
1.1	Device should have 24*100M/1G Ports and 4x 1/10G or better Uplink Ports in 1 RU fixed Form Factor.
1.2	Device should have a total Throughput of 128 Gbps.
1.3	Device should support copper Base-T (1G) connectivity over CAT6 cable and 1G, Dual rate 1G/10G SFP+ fiber connectivity over MM and SM cable for the Uplink ports.
1.4	Device should support upto 32K MAC address
1.5	Device should support upto 8K IPv4 and 2k IPv6 routes simultaneously
1.6	Device should have 1G management port, USB port, and console port
2	**L2 features**
2.1	Device should support 4K VLANs, 9K Jumbo frame
2.2	Device should support MST, per-VLAN, RSTP, BPDU Guard, Loop Guard
2.3	Device support LLDP, LLDP-MED, and LACP to bundle links and detect mis-cabling issues.
2.4	Device Should support IEEE 802.1D, 802.1Q, 802.1w, 802.1s, 802.3x, and 802.1x and Q-in-Q
3	**L3 features**
3.1	Device should support Routing Protocols: OSPFv2 with multiple instances, OSPFv3, BGP, MP-BGP, IS-IS, and RIPv2
3.2	Device Should support BFD on LAG and IP unnumbered interfaces.
3.3	Device Should support 16-way ECMP, VRRP V4, and V6

3.4	Should support GRE tunnel interface
3.5	Device must be IPv6 ready.
3.6	Device should support IGMP v2/v3, PIM-SM, Anycast RP (RFC 4610)
3.7	Device should support VxLAN+EVPN
4	**High availability**
4.1	Device should have N+1 redundant Fans
4.2	Device should have N + 1 redundant power supply
5	**security**
5.1	Should support Storm control and Control Plane protection (CPP)
5.2	should support ACL with l2, L3 and L4 parameters upto 2K ACLs
5.3	Device should support IEEE 802.1x Authentication framework, MAC authentication, Dynamic VLAN assignment, named VLAN assignment.
5.4	Device should support priority between 802.1x and Mac-based authentication
5.5	Device should support BFD inclusive of Multi-hop BFD and BFD on IP unnumbered interfaces
5.6	Device should support BGP monitoring protocol (BMP)
5.7	Device should support real-time data collection with sflow/netflow and IPFIX support.
6	**Management**
6.1	Device Should support secure Zero touch provisioning with options to provision Certificates artifacts on the device when it boots.
6.2	should support real time state streaming/ telemetry for advance monitoring from day 1
6.3	Should Support industry standard hierarchical CLI, SSHv2, HTTPS, SCP, SFTP, CLI task scheduler and configuration session.
6.4	should support NTP
6.5	should support SNMP v1/2/3 and OpenConfig model over gRPC/Netconf
6.6	Device should support real time data collection with sflow/netflow
6.7	Should support tracking changes in MAC table, ARP, IPv6 neighbor table and IPv4, v6 route table for troubleshooting purpose.
7	**Automation & Visibility**
7.1	Device should support multiple simultaneous mirroring sessions across all ports.
7.2	should have programmability and automation support with on board python and bash
8	**QOS**
8.1	should support 8 queues per port
8.2	should support priority queue
8.3	should support Weighted Fair Queue or Weighted round robin or equivalent
8.4	should support ACL based classification for QoS
8.5	Should support rate limiting function like policing and shaping
9	**Others**
9.1	Switch shall conform to EN 55035, EN 61000-3-3, EN 62368-1, VCCI Standards
9.2	All licences should be provided with the devices for the mentioned features. Hardware warranty 36 months.

b. Supply and installation of 48 Port Access Switch (PoE)(Quantity: 01) as per the description below:

S.No	48 Port Access Switch (PoE)
1	**Hardware Specifications**
1.1	Device should have 24*100M/1G Ports and 4x 1/10G or better Uplink Ports in 1 RU fixed Form Factor.
1.2	Device should have total Throughput of 176 Gbps.
1.3	Device should support copper Base-T (1G) connectivity over CAT6 cable and 1G, Dual rate 1G/10G SFP+ fiber connectivity over MM and SM cable for the Uplink ports.
1.4	Device should support up to 32K MAC address
1.5	Device should support up to 8K IPv4 and 2k IPv6 routes simultaneously
1.6	Device should have 1G management port, USB port, and the console port. All RJ45 ports should support 30W power simultaneously
2	**L2 features**
2.1	Device should support 4K VLANs, 9K Jumbo frame
2.2	Device should support MST, per-VLAN, RSTP, BPDU Guard, Loop Guard
2.3	Device support LLDP, LLDP-MED, and LACP to bundle links and detect miscabling issues.
2.4	Device Should support IEEE 802.1D, 802.1Q, 802.1w, 802.1s, 802.3x, and 802.1x and Q-in-Q
3	**L3 features**
3.1	Device should support Routing Protocols: OSPFv2 with multiple instances, OSPFv3, BGP, MP-BGP, IS-IS, and RIPv2
3.2	Device Should support BFD on LAG and IP unnumbered interfaces.
3.3	Device Should support 16-way ECMP, VRRP V4, and V6
3.4	Should support GRE tunnel interface
3.5	Device must be IPv6 ready.
3.6	Device should support IGMP v2/v3, PIM-SM, Anycast RP (RFC 4610)
3.7	Device should support VxLAN+EVPN
4	**High availability**
4.1	Device should have N+1 redundant Fans
4.2	Device should have N + 1 redundant power supply
5	**security**
5.1	Should support Storm control and Control Plane protection (CPP)
5.2	should support ACL with l2, L3 and L4 parameters upto 2K ACLs
5.3	Device should support IEEE 802.1x Authentication framework, MAC authentication, Dynamic VLAN assignment, named VLAN assignment.
5.4	Device should support priority between 802.1x and Mac based authentication
5.5	Device should support BFD inclusive of Multi-hop BFD and BFD on IP unnumbered interfaces
5.6	Device should support BGP monitoring protocol (BMP)
5.7	Device should support real time data collection with sflow/netflow and IPFIX support.
6	**Management**
6.1	Device Should support secure Zero touch provisioning with options to provision Certificates artifacts on the device when it boots.
6.2	should support real time state streaming/ telemetry for advance monitoring from day 1

6.3	Should Support industry standard hierarchical CLI, SSHv2, HTTPS, SCP, SFTP, CLI task scheduler and configuration session.
6.4	should support NTP
6.5	should support SNMP v1/2/3 and OpenConfig model over gRPC/Netconf
6.6	Device should support real time data collection with sflow/netflow
6.7	Should support tracking changes in MAC table, ARP, IPv6 neighbor table and IPv4, v6 route table for troubleshooting purpose.
7	**Automation & Visibility**
7.1	Device should support multiple simultaneous mirroring sessions across all ports.
7.2	should have programmability and automation support with on board python and bash
8	**QOS**
8.1	should support 8 queues per port
8.2	should support priority queue
8.3	should support Weighted Fair Queue or Weighted round robin or equivalent
8.4	should support ACL based classification for QoS
8.5	Should support rate limiting function like policing and shaping
9	**Others**
9.1	Switch shall conform to EN 55035, EN 61000-3-3, EN 62368-1, VCCI Standards
9.2	All licenses should be provided with the devices for the mentioned features. Hardware warranty 36 months.

c. Supply and installation of AP access port C-230(Quantity: 10) as per the description below:

AP access port C-230 (OEM: ARISTA)

TERMS AND CONDITIONS

1. The financial bid should be valid for a period of not less than 21 days from the date of opening of the bid i.e. 21 days from 03 July 2023, at 03:00 PM.
2. It is mandatory for the bidder to submit the technical and financial bids in separate envelopes. Failure to comply with this requirement, specifically if the financial document is included in the same envelope as the technical bid, will result in the rejection of the bid.
3. An amount of Rs.50000/- (Rupees fifty thousand only) towards earnest money(EMD) must be deposited in the form of a demand draft in favour of the “iHub Anubhuti-IIITD Foundation” account, payable at New Delhi. No interest will be paid on the earnest money deposited by the bidder. Tender Documents without earnest money will be summarily rejected. The tender fee is exempted for MSMEs/NSIC registered suppliers (Certificate to be submitted for exemption). It should be submitted in the technical bid envelope.
4. The bidder is required to submit the compliance sheet in the technical bid envelope as outlined in Annexure 1.
5. The product is to be supplied within a period of 08-10 weeks from the date of issue of the Purchase Order

(PO) by the iHub-Anubhuti.

6. The bidder must provide a comprehensive warranty of three years for each item starting from the date of delivery or installation (whichever is later).
7. The bid must contain the MAF (Manufacturer Authorization Form) in the technical bid envelope; in the absence of the MAF, the bid will be summarily rejected and no further communication will be entertained in this regard.
8. Sealed bids can be sent by post. The responsibility for delivery of the bid lies entirely with the bidder.
9. Bids will be opened in the presence of the bidder's representatives, who choose to attend on the specified date and time. Only one representative shall be allowed to attend.
10. Upon placing the Purchase Order (PO), the successful bidder is required to submit a performance Bank Guarantee (PBG) equivalent to 5% of the PO value within 15 days of the date of the PO, failing which the EMD amount will be forfeited and the bidder shall be notified as blacklisted. The PBG shall be valid for a period of 38 months from the date of purchase order. No interest is payable on the PBG.
11. PBG will be realized by iHub Anubhuti-IIITD Foundation in case of termination of the contract for unsatisfactory performance and/or non-performance of the contract.
12. Payment will be released after successful supply and installation as certified by the CEO/ Sr. Manager of the iHub-Anubhuti.
13. In the event of a dispute, the CEO/ Sr. Manager, iHub-Anubhuti shall be the sole arbitrator and his decision shall be final and binding on both parties.
14. iHub-Anubhuti does not bind itself to accept the lowest or any other offer and reserves the right to accept or reject any or all the offers either in full or in part without assigning any reason.

PROFORMA FOR FINANCIAL BID

S. No.	Item Name	Quantity	Base Cost (Rs.)	Taxes (Rs.)	Total Cost (All Inclusive) (Rs.)
1	**24 Port Access Switch (Non-PoE)**	1			
2	**48 Port Access Switch (PoE)**	2			
3	**AP access port C-230 (OEM: ARISTA)**	10			
Total		13			

Total Cost (All inclusive) of quantity mentioned above (in words):

We accept that the rate quoted above shall remain valid for a period of 21 days from the date mentioned below. The product shall be supplied within a period of 08-10 weeks from the date of placing the Purchase Order on us.

(Signature and seal of the Bidder)
Date:

Annexure 1

S. No	24 Port Access Switch (Non PoE)(Quantity:1)	Compliance (Yes/No)	Cross Reference
1	**Hardware Specifications**		
1.1	Device should have 24*100M/1G Ports and 4x 1/10G or better Uplink Ports in 1 RU fixed Form Factor.		
1.2	Device should have total Throughput of 128 Gbps.		
1.3	Device should support copper Base-T (1G) connectivity over CAT6 cable and 1G, Dual rate 1G/10G SFP+ fiber connectivity over MM and SM cable for the Uplink ports.		
1.4	Device should support upto 32K MAC address		
1.5	Device should support upto 8K IPv4 and 2k IPv6 routes simultaneously		
1.6	Device should have 1G management port, USB port and console port		
2	**L2 features**		
2.1	Device should support 4K VLANs, 9K Jumbo frame		
2.2	Device should support MST, per-vlan, RSTP, BPDU Guard, Loop Guard		
2.3	Device support LLDP, LLDP-MED and LACP to bundle links and detect miscabling issues.		
2.4	Device Should support IEEE 802.1D, 802.1Q, 802.1w, 802.1s, 802.3x and 802.1x and Q-in-Q		
3	**L3 features**		
3.1	Device should support Routing Protocols: OSPFv2 with multiple instances, OSPFv3, BGP, MP-BGP, IS-IS, and RIPv2		
3.2	Device Should support BFD on LAG and IP unnumbered interfaces.		
3.3	Device Should support 16-way ECMP, VRRP V4 and V6		
3.4	Should support GRE tunnel interface		
3.5	Device must be IPv6 ready.		
3.6	Device should support IGMP v2/v3,PIM-SM, Anycast RP (RFC 4610)		
3.7	Device should support VxLAN+EVPN		
4	**High availability**		
4.1	Device should have N+1 redundant Fans		
4.2	Device should have N + 1 redundant power supply		
5	**security**		
5.1	Should support Storm control and Control Plane protection (CPP)		
5.2	should support ACL with l2, L3 and L4 parameters upto 2K ACLs		
5.3	Device should support IEEE 802.1x Authentication framework, MAC authentication, Dynamic VLAN assignment, named VLAN assignment.		
5.4	Device should support priority between 802.1x and Mac based authentication		

5.5	Device should support BFD inclusive of Multi-hop BFD and BFD on IP unnumbered interfaces		
5.6	Device should support BGP monitoring protocol (BMP)		
5.7	Device should support real time data collection with sflow/netflow and IPFIX support.		
6	**Management**		
6.1	Device Should support secure Zero-touch provisioning with options to provision Certificates artifacts on the device when it boots.		
6.2	should support real time state streaming/ telemetry for advance monitoring from day 1		
6.3	Should Support industry standard heirarchical CLI, SSHv2, HTTPS, SCP, SFTP, CLI task scheduler and configuration session.		
6.4	should support NTP		
6.5	should support SNMP v1/2/3 and OpenConfig model over gRPC/Netconf		
6.6	Device should support real time data collection with sflow/netflow		
6.7	Should support tracking changes in MAC table, ARP, IPv6 neighbor table and IPv4, v6 route table for troubleshooting purpose.		
7	**Automation & Visibility**		
7.1	Device should support multiple simultaneous mirroring sessions across all ports.		
7.2	should have programability and automation support with on board python and bash		
8	**QOS**		
8.1	should support 8 queues per port		
8.2	should support priority queue		
8.3	should support Weighted Fair Queue or Weighted round robin or equivelent		
8.4	should suppprt ACL based based classification for QoS		
8.5	Should support rate limiting fuction like policing and shaping		
9	**Others**		
9.1	Switch shall conform to EN 55035, EN 61000-3-3, EN 62368-1, VCCI Standards		
9.2	All licences should be provided with the devices for the mentioned features. Hardware warranty 36 months.		

S.No	48 Port Access Switch (PoE)	Compliance (Yes/No)	Cross Reference
1	**Hardware Specfications**		
1.1	Device should have 24*100M/1G Ports and 4x 1/10G or better Uplink Ports in 1 RU fixed Form Factor.		
1.2	Device should have total Throughput of 176 Gbps.		
1.3	Device should support copper Base-T (1G) connectivity over CAT6		

	cable and 1G, Dual rate 1G/10G SFP+ fiber connectivity over MM and SM cable for the Uplink ports.		
1.4	Device should support upto 32K MAC address		
1.5	Device should support upto 8K IPv4 and 2k IPv6 routes simultaneously		
1.6	Device should have 1G management port, USB port and console port. All RJ45 ports should support 30W power simultaneously		
2	**L2 features**		
2.1	Device should support 4K VLANs, 9K Jumbo frame		
2.2	Device should support MST, per-vlan, RSTP, BPDU Guard, Loop Guard		
2.3	Device support LLDP, LLDP-MED and LACP to bundle links and detect miscabling issues.		
2.4	Device Should support IEEE 802.1D, 802.1Q, 802.1w, 802.1s, 802.3x and 802.1x and Q-in-Q		
3	**L3 features**		
3.1	Device should support Routing Protocols: OSPFv2 with multiple instances, OSPFv3, BGP, MP-BGP, IS-IS, and RIPv2		
3.2	Device Should support BFD on LAG and IP unnumbered interfaces.		
3.3	Device Should support 16-way ECMP, VRRP V4 and V6		
3.4	Should support GRE tunnel interface		
3.5	Device must be IPv6 ready.		
3.6	Device should support IGMP v2/v3,PIM-SM, Anycast RP (RFC 4610)		
3.7	Device should support VxLAN+EVPN		
4	**High availability**		
4.1	Device should have N+1 redundant Fans		
4.2	Device should have N + 1 redundant power supply		
5	**security**		
5.1	Should support Storm control and Control Plane protection (CPP)		
5.2	should support ACL with l2, L3 and L4 parameters upto 2K ACLs		
5.3	Device should support IEEE 802.1x Authentication framework, MAC authentication, Dynamic VLAN assignment, named VLAN assignment.		
5.4	Device should support priority between 802.1x and Mac based authentication		
5.5	Device should support BFD inclusive of Multi-hop BFD and BFD on IP unnumbered interfaces		
5.6	Device should support BGP monitoring protocol (BMP)		
5.7	Device should support real time data collection with sflow/netflow and IPFIX support.		
6	**Managment**		

6.1	Device Should support secure Zero touch provisioning with options to provision Certificates artifacts on the device when it boots.		
6.2	should support real time state streaming/ telemetry for advance monitoring from day 1		
6.3	Should Support industry standard heirarchical CLI, SSHv2, HTTPS, SCP, SFTP, CLI task scheduler and configuration session.		
6.4	should support NTP		
6.5	should support SNMP v1/2/3 and OpenConfig model over gRPC/Netconf		
6.6	Device should support real time data collection with sflow/netflow		
6.7	Should support tracking changes in MAC table, ARP, IPv6 neighbor table and IPv4, v6 route table for troubleshooting purpose.		
7	**Automation & Visibility**		
7.1	Device should support multiple simultaneous mirroring sessions across all ports.		
7.2	should have programability and automation support with on board python and bash		
8	**QOS**		
8.1	should support 8 queues per port		
8.2	should support priority queue		
8.3	should support Weighted Fair Queue or Weighted round robin or equivelent		
8.4	should suppprt ACL based based classification for QoS		
8.5	Should support rate limiting fuction like policing and shaping		
9	**Others**		
9.1	Switch shall conform to EN 55035, EN 61000-3-3, EN 62368-1, VCCI Standards		
9.2	All licences should be provided with the devices for the mentioned features. Hardware warranty 36 months.		