

College of Engineering Trivandrum, Thiruvananthapuram
NOTICE INVITING TENDER(Re Tender)

Tender No. E-Tender ID	:49/2023/P5/HPC/Switch :2024_DTE_639061_3
Description	:Purchase of L3 manageable 24port network 10G ethernet switch (Stackable) and L3 manageable 24port network 10G Fiber switch (Stackable)
Superscription	:Purchase of L3 manageable 24port network 10G ethernet switch(Stackable) and L3 manageable 24port network 10G Fiber switch (Stackable) for establishing High Performance Computing Centre in College of Engineering, Thiruvananthapuram
Last date and time of receipt of tender on the website (www.etenders.kerala.gov.in)	:01/11/2024, 3 PM
Date and time of opening of tender Place	: 04/11/2024, 11 AM College of Engineering Trivandrum, Thiruvananthapuram
Date upto which the rates are to be firm	: 01/05/2025
Bidding fee	: ₹ 4484/- (3800.+18%GST) Rs.3800/- should be paid to department, GST should be paid to GST Department by bidder.
EMD required	: ₹ 25,000/-
Address of the Officer to whom hard copy is to be send.	: THE PRINCIPAL, COLLEGE OF ENGINEERING TRIVANDRUM, THIRUVANANTHAPURAM-695016, KERALA

Specifications

Sl. No.	Item & Specifications	Qty
	L3 manageable 24 port network 10G ethernet switch (Stackable) 24x10G Multigigabit switch with 4x25G 2x100G uplink/stacking ports. 90W POE. MACsec AES256, TAA version, Power Cord, AC, (Indian standard), C15M, 10A/250V, 2.5m, RA plug to straight high temp C15M, 1050W	

1	Compact AC AFO power supply for the switches, QSFP28, 100GE Direct Attach Copper Cable, 1 meter, Standard Temperature (0 through 70 DEGREE C), 0.015W, 30 AWG, Next Day Support for 36 Months Detailed specifications attached in Annexure I	1
2	L3 manageable network 24 port 10G Fiber switch (Stackable) 24x10GbaseX switch with 2x100G uplink ports. MACsec AES256. Airflow out of PSU. Optional module- 4x10G or 4x25G, AC Power Cable - (Indian standard) (6A/250V, 2.5m), 550W compact AC AFO power supply for the switches, QSFP28, 100GE Direct Attach Copper Cable, 1 meter, Standard Temperature (0 through 70 DEGREE C), 0.015W, 30 AWG, Next Day Support for 36 Months Detailed specifications attached in Annexure II	2

Annexure I & II

I. L3 manageable 24 port network 10G ethernet switch (Stackable)

Detailed Technical Specifications
Minimum 24 x 100M/1/2.5/5/10GbE copper and should have 4 x 10/25G uplink Ports.
1 U Rack mountable and should provide stacking of minimum 10 switches with 400Gbps or more of dedicated stacking/ equivalent bandwidth (All the stacking accessories should be included from day 1). This switch should be stackable with 10G SFP+ switch of this tender
The Switch should have 4GB DRAM and 10GB internal Flash
1000 Gbps or higher Backplane capacity and minimum 800 Mpps or more of forwarding rate
Should support Non-blocking hardware architecture
Support for at least 4000 VLANs & 60k MAC address
Should support 64K IPv4 & 64K IPv6 routes.
It should support IGMP snooping v1,v2 & v3
It should have static IP routing like OSPF and PIM from Day 1 and should be upgradable to

support BGP
Should support VXLAN & EVPN
Should support ESI-LAG
Switch should support 8 hardware queues per port
Dynamic Host Configuration Protocol (DHCP) snooping
Switch should support LLDP capabilities
Should support IP Source Guard , DAI and IPv6 Security feature like IPv6 RA Guard and IPv6 Neighbor Discovery Inspection
Should support Secure Shell (SSH) Protocol and Simple Network Management Protocol Version 3 (SNMPv3).
Switch needs to have console port for administration & management
Management using CLI, GUI using Web interface should be supported
FTP/TFTP for upgrading the operating System
IEEE 802.1D Spanning-Tree Protocol, IEEE 802.1p class-of-service (CoS) prioritization, IEEE 802.1Q VLAN
Switch should have internal redundant power supply and Hot Swappable fans
Switch should able to support management via CLI, Web interface
SNMP v1,v2,v3
Switch should be manageable through both IPv4 & IPv6.
Switch series should be UL-UL60950-1,FCC Part 15, VCCI Class A, EN 55022/55032, Reduction of Hazardous Substances (ROHS) certified
The Switch series should be IPv6 (IPv6 Logo ready/ USGv6) certified
The switch should support a minimum 1776W of PoE power budget (using two power supplies).

II. L3 manageable network 24 port 10G Fiber switch (Stackable)

Detailed Technical Specifications
Solution Requirement
The Switch should support non-blocking Layer 2 switching and Layer 3 routing
There switch should not have any single point of failure like power supplies and fans etc. should have 1:1/N+1 inbuilt level of redundancy
Hardware and Interface Requirement
Switch should have 24 x 1/10G SFP fiber ports from day1 and should have option to add 4 x 1/10G QSFP28 uplink ports
1 U Rack mountable and should provide stacking of minimum 10 switches with 400 Gbps or more of dedicated stacking/ equivalent bandwidth (All the stacking accessories should be included from day 1). This switch should be stackable with 10G copper switch of this tender
Switch should have 4GB DRAM and 16GB internal Flash/Storage
Switch should support Configuration roll-back
Switch should support different logical interface types like loopback, VLAN, SVI/RVI, Port Channel, multi chassis port channel/LAG etc.
The switch should support hardware based load sharing at wire speed using LACP and multi

chassis ether channel/LAG
Switch should support minimum 1000Gbps of switching capacity and 800Mpps forwarding
Layer2 Features
Switch should support minimum 80,000 no. of MAC addresses
Spanning Tree Protocol (IEEE 8201.D, 802.1W, 802.1S)
Switch should support 8 Nos. of link or more per Port channel (using LACP) and support 24 number of ports per Link Aggregation Group.
Support for broadcast, multicast and unknown unicast storm control to prevent degradation of switch performance from storm due to network attacks and vulnerabilities
Layer3 Features
The switch should support 80,000 IPv4 unicast routes and 80,000 IPv6 unicast routes entries in the routing table including 32,000 multicast routes
It should have static IP routing like OSPF and PIM from Day and should be upgradable to support BGP
Should support BGP, MBGP, IS-IS for IPv4 and IPv6
Switch should support multicast traffic reachability using PIM-SM and SSM
Should support VXLAN & EVPN
Should support ESI-LAG
Availability
Switch should provide gateway level of redundancy in IPv4 and IPv6 using HSRP/ VRRP
Switch should support for BFD For Fast Failure Detection
Quality of Service
Switch system should support 802.1P classification and marking of packet CoS, DSCP etc.
Switch should support for different type of QoS features for real time traffic differential treatment using WRED and SP Queuing
Switch should support Flow control of Ethernet ports to control traffic rates during congestion by allowing congested nodes to pause link operation at the other end for receiving traffic as per IEEE 802.3x
Security
Switch should support control plane i.e. processor and memory Protection from unnecessary or DoS traffic by control plane protection policy
Switch should support for external database for AAA using TACACS+ / Radius
Switch should support for Role Based access control (RBAC) for restricting host level network access as per policy defined
Manageability
Switch should support for embedded RMON/RMON-II for central NMS management and monitoring
Switch should provide remote login for administration Telnet, SSHv2
Switch should support for management and monitoring status using different type of Industry standard NMS using SNMP V2 and V3
Switch should support for basic administrative tools like Ping and traceroute
Switch should support central time server synchronization using Network Time Protocol NTP V4
Switch series should be UL-UL60950-1,FCC Part 15, VCCI Class A, EN 55022/55032,

Reduction of Hazardous Substances (ROHS) certified
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The Switch series should be IPv6 (IPv6 Logo ready/ USGv6) certified

General conditions

- 1.The price quoted should be inclusive of all taxes, freight charges, unloading charges, installation and commissioning charges and should be furnished unambiguously.
- 2.Payment: 100 % after successful supply, installation, commissioning and demonstration.
- 3.Delivery Period: Maximum Delivery period will be 60 days from the date of receipt of supply order.
- 4.Agreement as per NIT 2 in Rs.220/- Kerala Stamp Paper and tender form should be uploaded.
5. 5% security deposit along with agreement should be furnished within a month/fortnight from the date of receipt of supply order.
- 6.Date of opening of tender: In case the proposed date declared as holiday, the tender will be opened on the next working day.
7. Bidder should have Direct Office & Service Centre in Kerala
8. The firm should provide samples of the material to be supplied before the opening of the financial bid.
9. The firm should be willing to supply the goods as per specification (along with name and numbering) within a short notice period.
10. Bidder should be a registered Company in India and existing for the past ten years in India
- 11.Bidder should should have a valid ISO 9001:2015 certificate
- 12.Valid Service Tax/ Sales Tax Registration Certificates from concerned authorities
- 13.Bidder should be an authorized Partner of respective OEM's. Bidder should submit authorization letter from respective OEMs.
14. Bidder should not have been blacklisted from any of the government or public sector undertakings in India
- 15.Bidder's complete address and contact details should be furnished
- 16.Bidder should have completed similar 3 installations in last 3 years at any Government Departments, Higher Educations/Research Institutions, University etc.
- 17.All switches should be from the same OEM
18. Bidder should specify the part number with detailed description of each items quoted

19.The bidder should submit the Technical Compliance along with the BID (adequate documents must be attached).

20.Bidder should have direct office & Service centre in Kerala

21.Warranty period 3 years.

22.100% payment against after successful delivery and installation.

23.Before the submission of the tender, the bidder must visit the worksite.A certificate of visit issued from CCF should be attached to the tender. Otherwise the tender will not be considered.(if the bidder authorise to another firm/person, should produce an authorization letter from the bidder.

If essential details mentioned in the tender criteria are not provided (especially authorization letter from respective OEMs, the part number with detailed description of the product quoted etc), no further communication will be done with the bidder, and the bid will be rejected.

NB: The Tender procedure will be made as per Rules mentioned in the Revised Store

Purchase Manual.

The bidders should participate this tender through E-Tendering System. Tender cost and EMD

should be submitted only through online. For more details Contact Ph.0471 2577088, 0471

2577188, 0471 257388, 0471 2515760.