# TENDER DOCUMENT FOR PURCHASE AND INSTALLATION OF ETHERNET SWITCHS

TENDE	ER NOTICE NO. :	CC/1/2014	
DATE &	TIME OF OPENING TENDER:	January 24, 2014 at 3.30	) p.m
NAME A	AND ADDRESS OF TENDERER :	Director, Computer Center Panjab University Chandigarh 160014	
TENDER	R PURHCASE DETAILS:		
i.	In cash: Rs. 1000/- (Amount deposited in the Account of Registrar, Panjab University, Chandigarh		
ii.	Rs. 1000/- (If the Tender Downloaded date Registrar, Panjab University, Chandig	in favor of	
iii.	Rs. 1100/- by Demand Draft No Name of Bank: Amount favor the Registrar, P.U. Chandigarh.		.· ost) in
EARNES (i)	ST MONEY DETAILS:  Rs 50,000/- By Demand Draft* No	dated	
	Name of Bank		
	*In favor of The Registrar, P.U. Chandiga	rh.	

# PANJAB UNIVERSITY, CHANDIGARH.

[Website: www.puchd.ac.in]

# TENDER DOCUMENT FOR PURCHASE AND INSTALLATION ETHERNET SWITCHS



LAST DATE FOR SUBMISSION OF TENDER: : January 24, 2014 by 3.00PM

DATE & TIME OF OPENING: January 24, 2014 at 3.30 pm

**PRICE Rs. 1000.** 

# TENDER DOCUMENT FOR PURCHASE AND INSTALLATION OF ETHERNET SWITCHS

# By Computer Center Panjab University, Chandigarh

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1. General Terms and Conditions

#### SECTION - I

#### 1. Invitation for Bids

- 1.1 The university proposes to PURCHASE AND INSTALLATION/REPLACEMENT OF ETHERNET SWITCHS and other accessories for better performance and to provide network connection to new buildings. The Panjab University is looking for vendors who have experience in supplying and installation of above type of hardware from high quality manufacturers like CISCO, Brocade, Juniper Networks, Alcatel –Lucent, H.P., Avaya, Entrasys Networks and Extreme Networks.
- 1.2 Tenderers are advised to study all technical and commercial aspects, instructions, forms, terms and specifications carefully in the tender document. Failure to furnish all information required in the Tender Document or submission of a bid not substantially responsive to the Tender document in every respect will be at the tenderer's risk and may result in the rejection of the bid.
- 1.3 Sealed offers prepared in accordance with the procedure enumerated in Clause 1 of Section II should be submitted to Director, Computer Center, Panjab University, not later than the date and time laid down, at his address given in the schedule for invitation to Tender under Clause 1.23 of Section I.
- 1.4 All bids must be accompanied by a bid security of Rs. 50,000/- in the form of Bank Draft / Bankers Cheque drawn from a scheduled bank in favour of the Registrar, Panjab University, Chandigarh, payable at Chandigarh.
- 1.5 This tender document is not transferable.
- 1.6 The categories of items and quantity indicated in the Tender Document are tentative, PU reserves the right to increase or decrease the quantity or delete some or all of the items depending on the needs of the Department/University without assigning any reasons.
- 1.7 The tenderer should indicate specifically the Basic Price, Taxes/Excise duty, other duties (if any), and levies chargeable quantitatively against each item. No additional information will be entertained after due date.
- 1.8 The bids should indicate clearly that the rates are F.O.R. destination, P.U., Chandigarh.
- 1.9 The tender should be submitted in Two cover system i.e. A and B. There should be proper indication of the contents on each envelope as indicated in clause 1.1 of section II. The drafts of earnest money and cost of tender/copy of receipt must be placed in envelope "A" in a separate sealed envelope indicating the amount, tender Notice Number and due date and enclosed with the bid.

- 1.10The tenderer should clearly indicate the availability of service and maintenance facilities at Chandigarh for the items quoted.
- **1.11**The above mentioned details particularly the Sales Taxes/excise duty, any other duty, if not quoted properly, the bid can be cancelled.
- 1.12The tenderers are required to quote for each item separately in terms of basic price and all other charges. Prices be quoted in Indian Currency only.
- 1.13The Tender should be submitted along with refundable Earnest Money of Rs.50,000/- in the shape of Demand draft valid for a period of 3 months in favour of The Registrar, PU, Chandigarh. Tenders not accompanied by Earnest Money or incomplete in any respect will be rejected outright.
- 1.14The Panjab University reserves the right to reject any or all tenders without assigning any reason whatsoever.
- 1.15The tenders will be opened on the date and time indicated in the presence of tenderers if any present on the occasion. If the date of opening is declared to be a holiday the tenders will be opened on the next working day.
- 1.16No advance payment or payment against Performa invoice will be made. Payment will be made after receipt, inspection, installation/testing of equipments.
- 1.17All damaged or unapproved goods shall be returned at the Tenderer risk and cost and the incidental expenditure thereupon shall be recovered from the concerned party.
- 1.18Printed conditions of the firm sent along with the quotation, if any, shall not be binding on us.
- 1.19Packing list must be put in all packages.
- 1.20On acceptance of tender, the date of delivery should be strictly adhered to otherwise, PU reserves the right not to accept the delivery in full or in part. In case the order is not executed within the stipulated period, PU will be at liberty to make purchases through other sources, and to forfeit the earnest money of the Tenderer.
- **1.21**No claim on account of payment of octroi etc. within the limits of the Municipal Corporation, Chandigarh shall be accepted.
- **1.22**Payment of bill will be made through by crossed account payee Cheque drawn on any Bank in Chandigarh. The decision to purchase each item is taken independent of other items quoted by the firm. It is not binding on the department to purchase all the items quoted by any particular firm.

#### 1.23 Schedule for Invitation to Tender

a) Address at which tender is to be submitted:

Director, Computer Center, Panjab University, Chandigarh- 160014

- b) Latest time and date for receipt of Tender: January 24, 2014 at 3.00 p.m
- c) Place, Time and Date of opening of Technical bids:

Place: Office of Director, Computer Centre Panjab University, Chandigarh.

Time & Date: January 24, 2014 at 3.30 p.m

d) Date till which the tender is valid:

180 days from the opening of technical bid. Installation of whole equipment will be within 8 weeks after the allotment of tender.

e) Panjab University shall not be responsible for any postal delay about non-receipt/non-delivery of the documents.

#### SECTION - II

#### 1. Procedure for submission of Bids

- 1.1 It is proposed to have a Two Cover System for this tender
  - A. Technical Bid (in duplicate) in one cover.
  - B. Commercial bid (in duplicate) in one cover.
- 1.2 Each copy of Technical Bid of the Tender should be covered in a separate sealed cover super scribing the wordings "Technical Bid". Each copy should be marked as "Original Copy" and "First Copy". Both should be put in a single sealed cover super scribing the wordings "Technical Bid".
- 1.3 Each copy of Commercial Bid of the Tender should be covered in a separate sealed cover super scribing the wordings "Commercial Bid". Each copy should be marked as "Original Copy" and "First Copy". Both should be put in a single sealed cover super scribing the wordings "Commercial Bid". Commercial Bid should only indicate prices (Preferably item-wise).
- 1.4 All the two documents viz. Technical Bid Cover and Commercial Bid Cover prepared as above are to be kept in a single sealed cover super scribed with

#### "ETHERNET SWITCHES"

- 1.5 The cover thus prepared should also indicate clearly the name and address of the tenderer to enable the Bid to be returned unopened in case it is declared "late".
- 1.6 A photocopy of the received of Earnest Money, if paid in cash, must be enclosed along with the Tender. In case the Earnest Money is paid by Demand Draft, the draft must be in a separate sealed envelope indicating the amount, tender Notice Number and due date and enclosed with the bid.

#### 2. Cost of Tender

The tenderer shall bear all costs associated with the preparation and submission of its Bid, including the cost of presentation for the purpose of clarification of the bid, if so desired by the client and the client will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the Tendering Process.

#### 3. Clarification of Tender Document

A prospective tenderer requiring any clarification of the Tender Document may notify the client in writing at the Client's mailing address indicated in Clause 1.26 of Section I. The Client will respond in writing to any request for clarification of the Tender Document, received not later than 07 working days prior to the last date for the receipt of bids prescribed by the Client. In case of any further clarification on any of the points in the tender, if required, a meeting can be held.

#### 4. Amendment of Tender Document

- 4.1 At any time prior to the last date for receipt of bids, the client may for any reason, whether at its own initiative or in response to a clarification requested by a prospective Tenderer, modify the Tender Document by an amendment.
- 4.2 The amendment will be notified on website of the university www.puchd.ac.in.
- 4.3 In order to afford prospective Tenderers reasonable time in which to take the amendment into account in preparing their bids, the Client may, at its discretion, extend the last date for the receipt of the Bids.

#### 5. Language of Bids

The bids prepared by the Tenderer and all correspondence and documents relating to the bids exchanged by the Tenderer and the Client, shall be written in English language, provided that any printed literature furnished by the Tenderer may be written in another language so long as accompanied by an English translation in which case, for purposes of interpretation of the bid, the English translation shall govern.

#### 6. Documents comprising the Bids

- 6.1 The Bids prepared by the Tenderers shall comprise of following components: -
  - A. Technical Bid shall consist of the following: -
    - (i) Technical Bid furnished as per the format for technical bid (Section III).
    - (ii) Technical literature for each product/service, covering full technical specifications.
    - (iii) Statement of total turnover of company of last three financial year.
    - (iv) Manufacturers license or authority from the manufacturer company.
    - (v) Latest Income Tax Return
    - (vi) Earnest money draft and Cost of tender

- (vii) Certificate that Company has not been blacklisted by Govt. Organization or Educational Institute.
- B. Commercial Bid consisting of the following: -
  - (i) Bid prices duly filled, signed and complete as per the format (Clause 3 of Section III).
  - (ii) Maximum educational discount as could be offered should be mentioned.

# SECTION – III

### ETHERNET SWITCHS SPECIFICATION

1.Layer 3 Switch (Cisco, Juniper, Avaya, Extreme, Brocade, Enterasys, Alcatel, HP) – 15 No.

SN	Specifications
1	The Layer 3 Switch/Chassis has to be configured with redundancy in power supplies and fans.
2	The Layer 3 Switch/Chassis should be configured to provide Wire-Speed Non-
_	Blocking Switching and Routing Performance at Layer 2 and Layer 3 on all ports.
3	The Layer 3 Switch/Chassis should have min 24 ports of 10/100/1000BaseT
4	The Layer 3 Switch/Chassis should have 8 ports of 1G SFP from day one. The ports
	should be capable of being upgraded to 8 ports of 10G SFP+ without any change in hardware.
5	The Layer 3 Switch/Chassis should have min 4 ports of 40G QSFP from day-1 for
	future use from an investment protection perspective.
6	The Layer 3 Switch/Chassis should provide Non-Blocking switch fabric capacity of 500 Gbps or more.
7	The Layer 3 Switch/Chassis should provide wire-speed packet forwarding of 350 Mpps or more.
8	The Layer 3 Switch/Chassis should support scalability to support upto 60 ports of wire speed 10G ports.
9	The Layer 3 Switch/Chassis should support min 16K MAC addresses and min 256 VLAN.
10	The Layer 3 Switch/Chassis should support full Layer 2 features like STP, RSTP, MSTP, PVST, LAG, LACP, ACL, QoS and IGMPv1/v2 from day 1.
11	The Layer 3 Switch/Chassis should support full Layer 3 features like PIM-DM, PIM-SM, RIPv1/v2, OSPF, PBR and VRRP from day 1. It should be scalable to support BGP & GRE tunnel features if required in future with a license.
12	The Layer 3 Switch/Chassis should support a minimum of 14K IPv4 Routes and 2500 IPv6 Routes in hardware.
13	The Layer 3 Switch/Chassis should be configured with full IPv6 features like RIPng, MLD v1/v2, OSPFv3, VRRPv3 and IPv6 management from day 1.
14	The Layer 3 Switch/Chassis should be quoted with 3 years onsite OEM support including TAC support.
15	Standards: RoHSv6 Compliant NEBS Compliant EAL3 certified
16	Lifetime warranty (or MINIMUM 5 YEARS)

# 2. Layer 2 Switch (Cisco, Juniper, Avaya, Extreme, Brocade, Enterasys, Alcatel, HP) – 30 No.

SN	Specifications		
1	It should have non-blocking wire-speed architecture.		
	In a standalone mode, the switch should provide minimum 24 10/100/1000 Mpps +		
	10 Gbps usable ports.		
2	Minimum 24 ports of 10 / 100 / 1000 base TX		
	Minimum 2x 10 Gigabit SFP+		
3	Switching fabric of switch should be minimum 88 Gbps or more.		
	Packet forwarding throughput should be 65.5 Mpps or higher for packet size		
	of 64 Bytes.		
	Minimum 10K MAC addresses		
	It should support minimum 256 Active VLANs and should be possible to		
	configure port based VLAN.		
4	Switch should support Jumbo Frame Size: 9216 bytes		
5	Management Features		
	It should support SNMPv1, v2 and v3, Telnet, FTP, HTTP, SSH, SSL		
	IGMP v1 / v2 / v3 snooping to optimize Multicast Traffic.		
	Should support dual image and multiple configuration file.		
	Web Based and CLI based management.		
	Port Mirroring for troubleshooting.		
	BootP / DHCP client.		
	Syslog support.		
-	RFC 2819 RMON Groups.		
6	Protocol Features: Layer 2 switching, DHCP support, auto-negotiation, ARP support, trunking, VLAN support, auto-uplink (auto MDI/MDI-X), IPv6 support, Rapid Spanning		
	Tree Protocol (RSTP) support, Multiple Spanning Tree Protocol (MSTP) support,		
	Dynamic Trunking Protocol (DTP) support, Port Aggregation Protocol (PAgP) support,		
	Trivial File Transfer Protocol (TFTP) support, Access Control List (ACL) support,		
	RADIUS support, Jumbo Frames support, MLD snooping, Dynamic ARP Inspection		
	(DAI), Unicast Reverse Path Forwarding (URPF), Uni-Directional Link Detection		
	(UDLD), Link Aggregation Control Protocol (LACP), Hot Standby Router Protocol		
	(HSRP) support		
7	Standards		
	RoHSv6 Compliant		
	NEBS Compliant		
	IEEE 802.1x support		
	IEEE 802.3x full duplex on 10BASE-T and 100BASE-TX ports		
	IEEE 802.1D Spanning-Tree Protocol		
	IEEE 802.1p class-of-service (CoS) prioritization		
	IEEE 802.1Q VLAN IEEE 802.3x be on 10 BaseTx / 100 Base Tx / 1000 Base Tx		
	IEEE 802.3u 10 BaseT / 100 Base Tx / 1000 Base Tx		
	EAL3 certified		
8	High availability Features		
	It should support 802.1w, 802.1s, 802.1d and 802.3ad.		
	The Switches should support quality of service (QoS), granular rate-limiting, Access		
	Control Lists (ACLs), and multicast services. It should support Ethertype classification,		
l	11 /1 /1 /1 /1 /1 /1 /1 /1 /1 /1 /1 /1 /		

	port disable rules, and port redirect action.
	It should support profile based role assignment functionality
9	Quality of service
	It should support advanced L2 features.
	It should support 802.1p, DSCP marking
	It should support Flow-based QoS for traffic prioritization
	It should support Eight hardware-based queues per port with Weighted Round Robin
	(WRR).
	It should support Flow-based bandwidth management, ingress policing; egress rate
	shaping per port.
10	IPv4 and IPv6
	Should support both IPv4 and IPv6.
11	Security Features
	802.1x port based user authentication with multiple host mode.
	802.1x Multi-client, multi-VLAN support for per-client authentication and VLAN
	assignment.
	Should support minimum 8 supplicants of 802.1x per port.
	Guest VLAN.
	MAC address lockdown.
	RADIUS and FTP security extensions
	Access control lists to filter out unwanted traffic including denial of service attacks
	STP root guard and BPDU guard.
12	Lifetime warranty (OR Minimum 5 years)

# 2. Compliance statement to be given by OEM/Vendor on their letterhead/with seal

### PERFORMA TO BE FILLED IN BY THE FIRM (Technical Bid).

#### 1. Layer 3 Switch (Cisco, Juniper, Avaya, Extreme, Brocade, Enterasys, Alcatel, HP) Please Tick

SN	Specifications	Compliance	Remarks
1	The Layer 3 Switch/Chassis has to be configured with		
	redundancy in power supplies and fans.		
2	The Layer 3 Switch/Chassis should be configured to		
	provide Wire-Speed Non-Blocking Switching and Routing		
	Performance at Layer 2 and Layer 3 on all ports.		
3	The Layer 3 Switch/Chassis should have min 24 ports of		
	10/100/1000BaseT		
4	The Layer 3 Switch/Chassis should have 8 ports of 1G SFP		
	from day one. The ports should be capable of being		
	upgraded to 8 ports of 10G SFP+ without any change in		
	hardware.		
5	The Layer 3 Switch/Chassis should have min 4 ports of 40G		
	QSFP from day-1 for future use from an investment		
	protection perspective.		
6	The Layer 3 Switch/Chassis should provide Non-Blocking		
	switch fabric capacity of 500 Gbps or more.		
7	The Layer 3 Switch/Chassis should provide wire-speed		
	packet forwarding of 350 Mpps or more.		
8	The Layer 3 Switch/Chassis should support scalability to		
	support upto 60 ports of wire speed 10G ports.		
9	The Layer 3 Switch/Chassis should support min 16K MAC		
10	addresses and min 256 VLAN.		
10	The Layer 3 Switch/Chassis should support full Layer 2		
	features like STP, RSTP, MSTP, PVST, LAG, LACP, ACL, QoS		
11	and IGMPv1/v2 from day 1.		
11	The Layer 3 Switch/Chassis should support full Layer 3 features like PIM-DM, PIM-SM, RIPv1/v2, OSPF, PBR and		
	VRRP from day 1. It should be scalable to support BGP &		
	GRE tunnel features if required in future with a license.		
12	The Layer 3 Switch/Chassis should support a minimum of		
12	14K IPv4 Routes and 2500 IPv6 Routes in hardware.		
13	The Layer 3 Switch/Chassis should be configured with full		
10	IPv6 features like RIPng, MLD v1/v2, OSPFv3, VRRPv3 and		
	IPv6 management from day 1.		
14	The Layer 3 Switch/Chassis should be quoted with 3 years		
	onsite OEM support including TAC support.		
15	Standards:		
	RoHSv6 Compliant		
	NEBS Compliant		
	EAL3 certified		
	Li Li common		
16	Lifetime warranty (or MINIMUM 5 YEARS)		

# 2. Layer 2 Switch (Cisco, Juniper, Nortel-Avaya, Extreme, Brocade, Enterasys, Alcatel, HP) Please Tick one

SN	Specifications	Compliance	Remarks
1	It should have non-blocking wire-speed architecture.		
	In a standalone mode, the switch should provide minimum		
_	24 10/100/1000 Mpps + 10 Gbps usable ports.		
2	Minimum 24 ports of 10 / 100 / 1000 base TX		
	Minimum 2x 10 Gigabit SFP+		
3	Switching fabric of switch should be minimum 88		
	Gbps or more.		
	Packet forwarding throughput should be 65.5 Mpps or		
	higher for packet size of 64 Bytes.		
	Minimum 10K MAC addresses		
	It should support minimum 256 Active VLANs and		
	should be possible to configure port based VLAN.		
4	Switch should support Jumbo Frame Size: 9216 bytes		
5	Management Features		
	It should support SNMPv1, v2 and v3, Telnet, FTP, HTTP,		
	SSH, SSL		
	IGMP v1 / v2 / v3 snooping to optimize Multicast Traffic.		
	Should support dual image and multiple configuration file.  Web Based and CLI based management.		
	Port Mirroring for troubleshooting.		
	BootP / DHCP client.		
	Syslog support.		
	RFC 2819 RMON Groups.		
6	Protocol Features: Layer 2 switching, DHCP support, auto-		
	negotiation, ARP support, trunking, VLAN support, auto-		
	uplink (auto MDI/MDI-X), IPv6 support, Rapid Spanning		
	Tree Protocol (RSTP) support, Multiple Spanning Tree		
	Protocol (MSTP) support, Dynamic Trunking Protocol (DTP)		
	support, Port Aggregation Protocol (PAgP) support, Trivial		
	File Transfer Protocol (TFTP) support, Access Control List		
	(ACL) support, RADIUS support, Jumbo Frames support,		
	MLD snooping, Dynamic ARP Inspection (DAI), Unicast Reverse Path Forwarding (URPF), Uni-Directional Link		
	Detection (UDLD), Link Aggregation Control Protocol		
	(LACP), Hot Standby Router Protocol (HSRP) support		
7	Standards		
,	RoHSv6 Compliant		
	NEBS Compliant		
	IEEE 802.1x support		
	IEEE 802.3x full duplex on 10BASE-T and 100BASE-TX ports		
	IEEE 802.1D Spanning-Tree Protocol		
	IEEE 802.1p class-of-service (CoS) prioritization		

	IEEE 802.1Q VLAN	
	IEEE 802.3x be on 10 BaseTx / 100 Base Tx / 1000 Base Tx	
	IEEE 802.3u 10 BaseT / 100 Base Tx / 1000 Base Tx	
	EAL3 certified	
8	High availability Features	
	It should support 802.1w, 802.1s, 802.1d and 802.3ad.	
	The Switches should support quality of service (QoS),	
	granular rate-limiting, Access Control Lists (ACLs), and	
	multicast services. It should support Ethertype	
	classification, port disable rules, and port redirect action.	
	It should support profile based role assignment	
	functionality	
9	Quality of service	
	It should support advanced L2 features.	
	It should support 802.1p, DSCP marking	
	It should support Flow-based QoS for traffic prioritization	
	It should support Eight hardware-based queues per port	
	with Weighted Round Robin (WRR).	
	It should support Flow-based bandwidth management,	
	ingress policing; egress rate shaping per port.	
10	IPv4 and IPv6	
	Should support both IPv4 and IPv6.	
11	Security Features	
	802.1x port based user authentication with multiple host	
	mode.	
	802.1x Multi-client, multi-VLAN support for per-client	
	authentication and VLAN assignment.	
	Should support minimum 8 supplicants of 802.1x per port.	
	Guest VLAN.	
	MAC address lockdown.	
	RADIUS and FTP security extensions	
	Access control lists to filter out unwanted traffic including	
	denial of service attacks	
	STP root guard and BPDU guard.	
12	Lifetime warranty (or MINIMUM 5 YEARS)	

# 3. Financial Bid

The Financial Bid may be submitted in the following Format. (Cost for each item may be mentioned separately).

### PERFORMA FOR RATES TO BE FILLED IN BY THE FIRM.

ITEM	Price	Price including Taxes

Signature with seal

#### **SECTION - IV**

#### TERMS AND CONDITIONS

- 1. The company should adhere with all seriousness to the time schedule provided by the Panjab University.
- 2. The products asked for should be of very high standard and of reputed company with authorized service provider in Chandigarh. Mutual trust and nature of services provided should motivate the service provider to give more than what is asked for in the agreement.
- 3. All the rates will be F.O.R, Panjab University, Chandigarh.
- 4. The Company shall be liable to indemnify the Panjab University in all respects and meet and pay off the litigation expenses and all the liabilities including damages, sums etc. arising out of and as a consequence of the negligence, deficiencies, mistakes, lapses, delays etc. in the execution of the various jobs and the services provided.
- 5. The company should ensure quick back up response in case of equipment failure which should be replaced if needed within 24 hours of the distress call.
- 6. There is no provision for making advance payment to the Company as per Panjab University rules. However, the running bills for the jobs completed can be submitted by the company and will be cleared for payment within reasonable period.
- 7. Send a copy of the profile of the company along with the costumers' satisfaction report.
- 8. Attach detail of the product with model number. Each product will have at least one year warranty.
- 9. All the products must reach the university within 30 days of the date of the purchase of order.
- 10. University has right to levy penalty for delay in service/supply.
- 11. University can provide custom duty exemption certificate.
- 12. Bank guarantee of 2% of the total cost of the project will be deposited by the successful vendor before release of payment.