

***Punjabi University, Patiala***  
*(Established under Punjab Act # 35 of 1961)*  
***University Computer Centre***

**SHORT TERM E-TENDER NOTICE**

E-Tenders on project rate basis through electronic tendering process are invited from the Manufacturers/ Suppliers/ Dealers etc., for the Purchase of items listed under the two different projects below, fulfilling the eligibility criteria mentioned herein that should be uploaded & received on <https://tenderwizard.com/PUNJAB>

- |  |   |  |
|--|---|--|
| 1. Last date and Time for receipt of Tender online | : | Date <b><u>07-05-2018 - 17:00 PM</u></b> |
| 2. Time and date of opening Technical bid          | : | Date <b><u>08-05-2018 - 11:00 AM</u></b> |
| 3. Time and date of opening Financial bid          | : | Date <b><u>08-05-2018 - 03:00 PM</u></b> |

<i>Sr .No</i>	<i>Name of Supply</i>	<i>Earnest Money (Refundable)</i>	<i>Tender Fees (Non Refundable)</i>	<i>Bid processing fee.</i>
1.	Purchase of Computer Networking Equipment and a Firewall for University Computer Centre at Punjabi University Patiala.	1,10,000/-	2,000/-	2,360/-

Aspiring Tenderer who has not obtained the User ID and password for participating in e- tendering may obtain the same by registering in the e- procurement portal [www.tenderwizard.com/PUNJAB](http://www.tenderwizard.com/PUNJAB). The Tenderers once registered can participate in any of the department tenders. For any clarification contact 9257209340, 0172-5035985, 8146699866 or E-mail : [etenderhelpdeskpb@gmail.com](mailto:etenderhelpdeskpb@gmail.com), [pavitar.s@tenderwizard.com](mailto:pavitar.s@tenderwizard.com)

1. Earnest Money and Tender form fees separately of required value shall be submitted in shape of DD of any Nationalised Bank payable in favour of The **Registrar**, Punjabi University Patiala. Tender fee, Earnest money must be reached on or before dated 08-05-2018 till 10:00 AM in the Office of the Director University Computer Centre.
2. Tender Processing fee should be paid through e- payment (Direct Debit or Internet Banking)
3. The Tender documents shall be uploaded in 2 folders.
  - (i) Folder-A: Shall contain pre-qualification documents such as Registration, PAN No., GST, Income Tax Return and Non Black list Self certificate etc uploaded on website.
  - (ii) Folder-B: shall contain financial bid on the prescribed form.
4. In case earnest money is not deposited for not having the required value, the bids will not be considered and rejected straightaway.
5. The folder–B: shall be opened only of those contractors who will be found technically qualified for the supply.
6. Corrigendum /Addendum/Corrections, if any will be published in the web site only. Firm shall continue to check the Web site [www.tenderwizard.com/PUNJAB](http://www.tenderwizard.com/PUNJAB)

## **PRE-QUALIFICATION REQUIREMENTS:-**

1. Manufacturers/Suppliers/ Authorized Dealers for Supply of Equipment categorized in the Project A and Project B can only participate.
2. The Supplier/Firm shall submit a copy of PAN No., GST No. etc.
3. The Supplier/firms shall submit copies of income tax return for the last 2 years.
4. The Supplier/firms shall also submit Self certification that they have not been debarred/blacklisted by any Govt./ Semi Govt. Organization or any Corporation at any stage.

## **Project A (Purchase of Firewall [University Computer Centre])**

### **Existing Infrastructure:**

Punjabi University, Patiala has been using Cyberoam 1500ia firewall since 2011 to cater the campus wide users for the various tasks, like user authentication, content filtering, bandwidth management, virtual host etc. Our campus is provided with 155 Mb/s from NKN project through NIC Chandigarh and 25 Mb/s from HFCL. The various buildings of the campus are connected through 10gb/ 1gb fibres with HP/3Com and D-Link switches.

The users are on all kinds of OS (iOS, OS X, windows Android and Linux). As of now, the authentication database is on local drive of Cyberoam only with approximate 20,000 users and the concurrent are ranged between 900-1500. We are expecting these numbers to outgrow near to double this year and 10% increment for the forthcoming years. Apart from this, we have to provide temporary network access to various guest faculties during the eve of workshops, seminars and other functions.

### **The firewall proposal should meet the following requirements:**

#### **1. Modal:**

- The proposed solution must be in the 'Leaders' Quadrant in latest Gartner's Magic Quadrant for UTM
- The Proposed solution should have ICSA certification and NSS recommendation for firewall
- The Proposed Solution should support HA deployment in Active Active

#### **2. Hardware Specifications**

- Power Supply : Redundant
- Storage : 400GB SSD
- Ethernet Ports : 8 GE copper (incl. 2 bypass pairs) with Extra Module Slots for Copper, SFP & 10GbE SFP+ support for future expansion.

#### **3. Security Performance**

- Firewall Throughput : 60Gbps
- IPS throughput : 15Gbps
- Antivirus throughput (proxy) : 10Gbps
- NGWF throughput : 8Gbps
- Concurrent connections : 2000000
- New connections/sec : 200000
- Maximum licensed users : unrestricted

#### **4. General Management**

- Purpose-built streamlined user interface
- Advanced trouble-shooting tools in GUI (e.g. Packet Capture)
- Full command-line-interface (CLI) accessible from GUI

- Role-based administration
  - Automated firmware update notification with easy automated update process and roll-back features
  - Reusable system object definitions for networks, services, hosts, time periods, users and groups, clients and servers
  - Configuration change tracking
- 5. Firewall, Networking & Routing**
- Stateful deep packet inspection firewall
  - User, group, time, or network based policies
  - Access time polices per user/group
  - Enforce policy across zones, networks, or by service type
  - Zone isolation and zone-based policy support
  - Customizable NAT policies with IP masquerading
  - Flood protection: DoS, DDoS and ports can blocking
  - Country blocking by geo-IP
  - WAN link balancing: multiple Internet connections, auto-link health check, automatic failover, automatic and weighted balancing and granular multipath rule
  - 802.3ad interface link aggregation
  - IPv6 support with tunnelling support including 6in4, 6to4, 4in6, and IPv6 rapid deployment (6rd) through IPSec
- 6. Traffic Shaping & Quotas**
- Network or user based traffic shaping (QoS).
  - Set user-based traffic quotas on upload/download or total traffic and cyclical or non-cyclical
- 7. Authentication**
- Transparent, proxy authentication (NTLM/ Kerberos) or client authentication
  - Authentication via: Active Directory, eDirectory, RADIUS, LDAP and TACACS+
  - Server authentication agents for Active Directory SSO, STAS, SATC
  - Client authentication agents for Windows, Mac OS X, Linux 32/64
  - Authentication certificates for iOS and Android
  - Single sign-on: Active directory, eDirectory
  - Authentication services for IPSec, L2TP, PPTP, SSL
  - Seamless Migration of existing User database
  - Captive Portal
- 8. Intrusion Prevention Systems (IPS)**
- High-performance, next-gen IPS deep packet inspection engine with selective IPS patterns for maximum performance and protection
- 9. ATP**
- Advanced Threat Protection (Detect and block network traffic attempting to contact command and control servers using multi-layered DNS, AFC, and firewall)
- 10. Web Protection and Control**
- Fully transparent proxy for anti-malware and web-filtering
  - Enhanced Advanced Threat Protection
  - URL Filter database with millions of sites
  - Surfing quota time policies per user/group
  - Access time polices per user/group
  - Malware scanning: block all forms of viruses, web malware, Trojans and spyware on HTTP/S, FTP and web-based email
  - Advanced web malware protection with JavaScript emulation

- Live Protection real-time in-the-cloud lookups for the latest threat intelligence
- Real-time or batch mode scanning
- Pharming Protection
- HTTP and HTTPS scanning on a per user or network policy basis with customizable rules and exceptions
- SSL protocol tunnelling detection and enforcement
- Certificate validation
- File type filtering by mime-type, extension and active content types (e.g. Activex, applets, cookies, etc.)
- SafeSearch enforcement

#### **11. Application Protection and Control**

- Enhanced application control with signatures and Layer 7 patterns for thousands of applications
- Application control based on category, characteristics (e.g. bandwidth and productivity consuming), technology (e.g. P2P) and risk level
- Per-user or network rule application control policy enforcement

#### **12. Web & App Traffic Shaping**

- Custom traffic shaping (QoS) options by web category or application to limit or guarantee upload/download or total traffic priority and bitrate individually or shared

#### **13. Logging and Reporting**

- Hundreds of on-box reports with custom report options.
- Applications Report (App Risk, Blocked Apps, Web Uses, Search Engines, Web Servers, FTP),
- Network & Threats Report (IPS, ATP, Wireless, Security Heartbeat),
- Compliance reports (HIPAA, GLBA, SOX, FISMA, PCI-DSS, NERC CIP v3, and CIPA)
- Current Activity Monitoring: system health, live users, IPsec connections, remote users, live connections, wireless clients, quarantine, and DoS attacks
- Report anonymization
- Report scheduling to multiple recipients by report group with flexible frequency options
- Export reports as HTML, PDF, Excel (XLS)
- Report bookmarks
- Full log viewer with retention customization by category

#### **End-user requirements:**

1. Have granular control that would allow the University to set specific policies based on any combination of date, day-of-week, time-of-day, ingress and egress software port, application, and user.
2. Identification, user identification, and content identification.
3. Administration tasks should not require specific OS.
4. Sustainable enough to handle 2000-2500 live users.

#### **Contract Term**

- Proposals (including price) must include an initial term of **three years**.
- Specify buy back price of our existing cyberoam 1500 ia (if interested) and specify final price after buy back price deduction.

#### **Installation**

1. Vendor will provide onsite installation and support (also includes configuration of AD/LDAP and reporting servers, the machines will be provided by the University).

2. All costs related to the installation of the equipment (including all necessary materials, labour, etc.) will be the responsibility of the vendor.

#### Maintenance/Support

- a. Vendor must have the ability to provide 24/7 support.

#### Training

- a. Vendor must provide onsite operation training to at least four (4) University staff members.

#### Warranty

- a. Hardware warranty should be provided along with the subscription of the Firewall.
- b. 24x7 Enhanced Plus Support via Telephone & Email with Remote Consultation
- c. FREE Security Updates & Patches
- d. FREE Software Features Updates & Upgrades
- e. Security Subscription - IPS , AV , Web & Application.

### Project B (Computer Networking Project [University Computer Centre])

Technical Specifications		
WLAN Controller (Hardware Based)		
Sr. No	Specifications	
1	Product Details	Make, Model No / Product code
		Rack mountable hardware appliance
		6 Gigabit or more Ethernet Ports; 2 1000BASE-T/ 1000BASE-X combo ports
		Console port for management
2	Performance & Capacity	Centralized Management of at least 190 APs with Single appliances (At least 160 APs licenses enabled on day one having lifetime validity & Upgradation)
		Controller should support distributed traffic forwarding allowing traffic to flow directly from source to destination, eliminating needless traffic to pass through the controller, delivering better performance and faster more-responsive applications.
		User isolation based on AC, AP and WLAN
		Wireless QoS: AP-based bandwidth limiting
		WLAN-based bandwidth limiting
		Static speed limiting and smart speed limiting based on user
		At least 6K wireless clients
		RF Management
		Optimized for Wave 1 and Wave 2
3	STA Management	STA Limiting based on AP and SSID
		AP-based load balancing; AP traffic-based load balancing; 5G priority access; RSSI threshold
		MAC Address/ Radius server support. It has to be implemented as per the satisfaction of customer

4	Roaming	Intra-controller and inter-controller Fast Roaming
		Roaming across Subnets and VLANs
5	Redundancy	Multi-Controller Redundancy, clustering (N+1 / 1+1 mode)
		Self-Healing around failed APs
6	Management	Management of both Indoor and Outdoor Aps
		802.11 a/b/g/n/ac
		Automatic L2/L3 discovery of Aps
		CAPWAP or equivalent encrypted communications between AP and Controller
		Dynamic RF channel and power management
7	Security	WLC Web authentication
		Integrated captive portal
		802.1x authentication
		Virtual AP technology
		802.11 security and encryption
8	Routing	WIDS
		IPv6 management and Static & Dynamic routing
9	Device Management	Console and Web management
		SNMP v1/v2C/v3
10	Access Control	Scalable to support BYOD, identity-based network policies
11	Warranty	Lifetime Warranty (minimum 5 years)

<b>802.11ac Wireless Access Point (Controller Managed)</b>		
<b>S. No</b>	<b>Specifications</b>	
1	Product Details	Make, Model No / Product code
2	I/O Ports	2 x 10/100/1000BASE-T autosensing RJ-45 PoE Ethernet Ports
		Both Ethernet ports should have PoE/ PoE+ on board support
		Management console port (RJ-45)
		Bluetooth (BLE) support
		1 USB Port / One Console port for management
3	Standards	Concurrent Tri-radio & Dual-band
		802.11b/g/n (2.4 GHz) and 802.11a/n/ac (5 GHz) operating bands
		Configurable dual 2.4Ghz + one 5Ghz bands or dual 5Ghz bands + one 2.4Ghz
		Indoor Access Point with inbuilt/internal antennas
4	Supported Data Rates	Data rates up to 2.9 Gbps or higher per AP
		Wave 1 and Wave 2 support
		4x4 MU-MIMO
		4 Spatial streams

		HT160, HT80, HT40, HT20
5	Modulation	BPSK, QPSK, 16QAM, 64QAM and 256QAM
6	Transmit Power	At least 100 mW or higher power
7	Capacity	At least 50+ or more simultaneous users per AP
8	RF Antenna	Smart / Adaptive or better antenna technology for wider coverage
9	Deployment Options	Standalone (individually managed)
		Managed by WLAN Controller
		AP Fall-back/Automatic switchover of AP to standalone mode/redundant Controller in case of failure of Controller to support high availability
		BSSIDs Up to 16 per radio; Up to 48 per AP
10	Performance	WMM/802.11e support
		Should support Spectrum analysis, heat Map Analysis, Fault detection and alarm
		Bluetooth Low Energy (BLE) Beaconing.
		Rate-limiting per User/AP
11	Security	WPA, WPA2 & 802.1x, PEAP authentication
		User isolation
		Rogue AP detection and Prevention
		SMS authentication
		Dynamic ACL assignment ,RADIUS Support, CPU Protection Policy (CPP) , Network Foundation Protection Policy (NFPP),
		Wireless Intrusion Detection System(WIDS),
		Wireless Intrusion Prevention System (WIPS).
		SNMP v1/v2C/v3 and Web management
		Link Aggregation support
		Fault detection and alarm
Wall/Ceiling Mounting kit to be supplied with AP		
13	Network Protocols	IPv4, IPv6 and dual-stack
14	Certifications	Wi-Fi CERTIFIED Interoperability / Wi-Fi Alliance or equivalent
15	Cloud Controller	Cloud AC management support for future Expansion
16	Standard	Wi-Fi Alliance Certification
		Safety Standard GB4943, EN/IEC 60950-1 or equivalent
		EMC Standard GB9254, EN301 489 or equivalent
		Health Standard EN 62311
		Radio Standard EN300 328, EN301 893 or equivalent
		Vibration Standard IEC60068 2-31, ETSI EN300 019, NEBS GR-63-CORE or equivalent
17	Enclosure	IP41 or better

18	Warranty	Lifetime Warranty (minimum 5 Years)
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8 Port POE Managed Switch		
S. No	Specifications	
	Product Details	Make/Model No; <b>(Cisco/HP/D-Link only)</b>
1	HARDWARE	POE 10BASE-T/100BASE-TX/1000BASE-T : 8
		1000BASE-X SFP Ports : 2
		Gigabit Managed Switches
2	Performance	Switching Capacity : 20 Gbps
		Min. 130 watts
		Internal/external surge protection on all Ethernet ports
		Lifetime Warranty (minimum 5 years)

24 Port POE Managed Switch		
Specifications		
Product Details	Make/Model No; <b>(Cisco/HP/D-Link only)</b>	
HARDWARE	POE 10BASE-T/100BASE-TX/1000BASE-T: 24	
	1000BASE-X SFP Ports : 2	
	Gigabit Managed Switches	
	370 watts	
	Internal/external surge protection on all Ethernet ports	
	Lifetime Warranty (minimum 5 years)	

Tentative Items Description for Punjabi University, Patiala		
Sr. No	Product Required	Quantity
1	Wireless Access Points	160
2	Wireless Controller (Hardware appliance)	1
3	24 Port POE Switch with SFP ( Gigabit Managed Switches)	6
4	8 Port POE Switch with SFP ( Gigabit Managed Switches) 130W	2
5	8 Port POE Switch without SFP (Gigabit Managed Switches) 130W	2
6	Management Software for wireless network	1
7	OFC SM Six core in meters	600
8	LIU 6 Port unloaded	8
9	SC Adaptors SM	48
10	Pigtails SM	48



11	SC Adaptors Plates	8
12	SC-LC Patch Cord SM	8
13	6 U Rack with accessories	2
14	12 U Rack with Accessories	3
15	SFTP Cable Roll 305 Meter	1
16	CAT 6E Cable roll 305 meter	2
17	CAT 6 jack Panel	3
18	CAT 6 Patch Cord1 Meter	30
19	Cat 6 I/O	15
20	SFP Module SM	8
21	Conduit Pipe 1" (ISI) with Clips & Accessories in meters	1200
22	Splicing	48
23	Iron Cages for AP	150
24	Hydraulic digging in meters	900
25	Manual Digging in meters	150
26	HDPE pipe with ISI mark in meters	800
27	Installation charges (If any)	

### Terms and Conditions:-

1. Prices should be inclusive of all taxes and levies in INR, FOR Punjabi University Patiala.
2. Payment will be released on successful installation and commissioning.
3. Order can be placed to different vendors for the two different Projects. Only one vendor will be selected for a single project.
4. All items to be supplied must be branded and shall be amply supported onsite directly by OEM. All RMA, shall be in name of Punjabi University, Patiala.
5. OEM shall be responsible for onsite training / deployment / configuration etc.
6. The material is to be made available/ installed within two weeks from date of placing confirmed Purchase Order along with all the bills.
7. If there is holiday on the receipt/opening day of the tender, the tender may be received/ opened on the next working day at the same time and at the same place.

8. The Purchase Committee reserves the right to reject the tender without assigning any reason before/after opening of the tenders and the tenderers shall have no right or any claim what so ever for the same on this account.
9. University reserves the right to increase/ decrease the quantity of items. The order for quantity of different items can be increased or decreased. The Suppliers/ Tenderers shall have no right or any claim what so ever for the same on this account. The payment for passive components will be made on the basis of actual consumption.
10. The rate quoted by the Supplier/Tenderer shall be inclusive of all the taxes i.e. GST or any other taxes levied by Central Govt. or State Government Authority or Local Bodies including their variations as notified by the Concerned Authority from time to time and of all the new taxes and levies that may be imposed. Firm will supply the material on quoted Rates which include F.O.R., Loading, Unloading, stacking and inclusive of all taxes. Nothing Extra shall be paid.
11. The Supplier/ Tenderer shall comply with the proper by- Laws and legal order of the local body or authority under the jurisdiction of which the supply is executed and pay all fees and charges for which he may be liable. Nothing extra shall be payable by the University on this account.
12. In case of failure of supply of material as per ordered specifications, the University reserve the right to reject the supply order and can forfeit the earnest money deposited by the firm.
13. In case of any dispute, the jurisdiction will be Patiala (Punjab) only.
14. In case of any clarification regarding tender contact Phone No. **0175-3046314-15,**  
**0175-2286570**
15. **Project related specific conditions have been mentioned in the technical specifications also.**

Director  
University Computer Centre  
Punjabi University, Patiala.  
01753046314-15, 2286570