

VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY, ODISHA, BURLA

Po: Engineering College, Burla, Dist: Sambalpur, Odisha, India, PIN: 768018
Phone: 0663-2430211, FAX: 0663-2430204, Website: www.vssut.ac.in



Tender document for Campus Networking and Installation of Next Generation Firewall

Tender Call Notice No. VSSUT/CIF/ **6729**/2019

Date: **04/10/19**

Submitted by

M/s.....

Last Date and Time of Submission of Tenders by Registered/Speed Post Only	: 06/11/2019, 4.00 PM
Cost of Tender Documents	: ₹ 1,000/- (Rupees One Thousand Only)
Cost of the EMD	: ₹ 50,000/- (Rupees Fifty Thousand Only)
Date of Pre-bid meeting	: 21/10/19, 11.00 AM
Date & Time of Opening of Technical bid	: 08/11/19, 3.00 PM
Date & Time of Opening of Price bid	: To be notified later

The Document is prepared by VSSUT, Burla. It should not be reused or copied or used either in partially or fully in any form. The information provided by the bidders in response to this Tender document will become the property of VSSUT, Burla and will not be returned.

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M. K. Saha
4/10/19



VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY: BURLA

P.O: Engineering College Burla (Siddhi Vihar), Dist: Sambalpur
Odisha- 768018, India

E-mail: registrar@vssut.ac.in, Ph:(0663)2430573,Fax-2430592

Advt.No.VSSUT/CIF/ 6729 /2019

Date: 04/10/19.

TENDER CALL NOTICE

Sealed Tender Documents are invited by the undersigned from intending reputed, registered and experienced firms for "Campus Networking and Installation of Next Generation Firewall" for the University. The last date of submission of quotation is 06/11/2019, 4.00 PM. The Technical bid shall be opened on 08/11/19 at 3.00 PM. The opening date of Price bid shall be notified later. For details visit University website www.vssut.ac.in.

Leah
04/10/19
Registrar

Registrar

VSS University of Technology
Burla, Sambalpur, Odisha-768018

Memo No. VSSUT/CIF/ 6730(6) /2019

04/10/19.

Copy to:

1. M/s Display Lines, 219 Saheed Nagar, Bhubaneswar. The above advertisement may be published in all editions of "The Samaj (Oriya Daily)" and all Odisha editions of "The New Indian Express (English Daily)" newspaper on or before 07/10/2019 in I&PR approved rates in one issue using minimum space. The bill may be sent in triplicate along with a copy of the paper in which the publications is made.
2. University Notice Board.
3. Dean (Faculty & Planning) with a request to display the advertisement on the University website.
4. The Comptroller of Finance, VSSUT, Burla for Information.
5. PA to Vice Chancellor for kind information of Hon'ble Vice Chancellor.
6. PA to Registrar for information vide the approval of Vice Chancellor.

REGISTRAR

Registrar
VSS University of Technology
Burla, Sambalpur, Odisha-768018

Sanat
4/10/19

M. V. S.
4/10/19

VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY, ODISHA, BURLA

Tender document for Campus Networking and Installation of Next Generation Firewall

Quotation Call Notice No. VSSUT/CIF/ 8729 /2019

Date: 04/10/19

The "Registrar, Veer Surendra Sai University of Technology, Burla" invites sealed tenders from the intending reputed Original Equipment Manufacturer or its registered authorized dealers for "Campus Networking and Installation of Next Generation Firewall" in the University.

All details and the quotation documents are available on the University website www.vssut.ac.in.

This quotation document contains the following.

- (i) General guidelines for submission of quotation
- (ii) Technical specification
- (iii) Information sheet of bidder
- (iv) Undertaking by the bidder
- (vii) The Financial bid

Last Date and Time of Submission of Tenders by Registered/Speed Post Only	: 06/11/2019, 4.00 PM
Cost of Tender Documents	: ₹ 1,000/- (Rupees One Thousand Only)
Cost of the EMD	: ₹ 50,000/- (Rupees Fifty Thousand Only)
Date of Pre-bid meeting	: 21/10/19, 11.00 AM
Date & Time of Opening of Technical bid	: 08/11/19, 3.00 PM

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04.10.19
Registrar

Registrar
VSS University of Technology
Burla, Sambalpur, Odisha-768018

General Guidelines for Submission of Tender

1. The bidder shall furnish an unconditional acceptance of all the terms and conditions of this tender call document through an undertaking.
2. The bidder shall submit a certificate (self-certified on letter head) that the firm has not been black listed by any institution of the State/Central Government in the past.
3. The bidder must be Original Equipment Manufacturer (OEM) or Business partner of the Original Equipment Manufacturer/Authorized Dealer. In case of business partner, the partner must be an Authorized Systems Integrator (ASI) having a direct purchase and support agreement with the OEMs for Next Generation Firewall (NGFW) and all other active devices. The bidder should provide supporting Manufacturer's Authorization certificate in this regard (that is authorized System Integrator/Authorized Dealer). (Please furnish the documentary evidence)
4. The bidder must have large support network across India.
5. The bidder shall have sufficient experience (minimum 3 years) as on bid calling date on Campus Networking and/or Supply, Installation, Testing, Training and Commissioning of the Security Devices/Appliances to Academic Institution/Corporate/Government or Public Sector in India.
6. The Bidder's key technical engineers should have OEM certifications to install and maintain the Security Devices/Appliances/IT equipment quoted by the Bidder.
7. The Bidder must submit satisfactory evidence of their capability and adequacy of resources to carry out this contract effectively from earlier users. ie project completion certificate from the Organizations where they have successfully completed the project.
8. The bidder should be a GST registered company
9. The bidder shall have sufficient experience (Minimum 03 Years) in maintenance of Campus Networking Next Generation Firewall (NGFW).
10. **Cost of Tender Documents:** The cost of quotation documents is Rs.1,000/- (Rupees One Thousand Only) (Non-refundable). The tender documents can be downloaded from the University website www.vssut.ac.in and have to deposit a DD equal to the cost of quotation documents drawn in favour of "VSSUT, Burla" payable at SBI, Burla or Syndicate Bank, VSSUT, Burla along with quotation.
11. **Earnest Money Deposit (EMD):** A bank draft towards EMD for the amount of Rs.50,000.00 (Rupees Fifty Thousands Only) drawn in favor of "VSSUT, Burla" payable at SBI, Burla or Syndicate Bank, Burla, must be submitted. The EMD will not carry any interest.
12. The completed document must reach to "The Registrar, Veer Surendra Sai University of Technology, Burla, PO. Burla, Dist. Sambalpur-768018 (Odisha) by the last date of submission i.e.

06.11.2019 4.00 PM under a sealed cover by registered/speed post only. The quotations received after the due date & time is liable to be rejected. Quotation by FAX/e-mail or any other media will not be entertained.

13. The envelope containing the quotation must be super-scribed as **“Tender document for Campus Networking and Installation of Next Generation Firewall (NGFW)”** with due date & time of submission.
14. The University is not responsible for delay, loss or non-receipt of tender documents sent by the post.
15. All documents and papers submitted by the bidder must be self-attested and stamped duly.
16. The tender should contain the following documents.
17. **Tender Bid Submission Process:** The quotation must be submitted in two-bid system:
(i) Technical bid and (ii) Price bid. The two bids must be submitted in two separate sealed envelopes each super-scribing clearly Technical Bid/Price Bid (as the case of envelope may be) and Bidders Name, Stamp & Signature on the envelope. However, please arrange all other documents as described and detailed below.

(Special Instruction: Please take care to tag all the papers by making a hole to handle the pages properly and to avoid loss of Papers from the packets and give Page Number Serially in each Page for quick reference in the respective Packets)

a. Document with respect to Eligibility (All Docs must be Self-attested) (Un-Sealed Packet)

- 1)** The envelope super-scribing **“Packet-1: Eligibility Documents”** should contain the following
 - i. Bank Draft (Non-refundable) towards the cost of tender documents in favor of “VSSUT, Burla”, payable at SBI, Burla or Syndicate Bank, VSSUT, Burla.
 - ii. Bank Draft for EMD in favor of “VSSUT, Burla” payable at SBI, Burla or Syndicate Bank, VSSUT, Burla.
 - iii. Information Sheet of the bidder (Annex-III)
 - iv. Unconditional acceptance letter of undertaking for the terms and conditions of this tender document in the prescribed format(Annex-IV)
 - v. Copy of PAN of the Firm and Proprietor, GST Registration Certificate etc., issued by appropriate Government authority for the required services with seal.
 - vi. Certificate of OEM/Business Partner/Authorized Dealer (in Original, which may be returned to the concerned party after verification)
 - vii. List of places with Network Support across India.
 - viii. List of user Clients related to experience of the bidder along with address and contact number of Clients with supporting documents like POs.

- ix. A technical capability document describing the relevant facilities and services available with them. Little bit company profile.
- x. Any other documents in support of the eligibility of the bidder.
- xi. Two self-addressed envelope of size 11"x5" (or above) with complete address with Pin and Contact No. written for future correspondence.
- xii. Two self-addressed slips of size 6"x3" (or above) with complete address with Pin and Contact No. written for future correspondence

b. Technical bid (Sealed Packet-2)

The envelope super-scribing "Packet-2: Technical Bid" should contain the following

- i. The technical compliance form for the Technical Specification must be filled up properly without any ambiguity as per the Annexure-I
- ii. Please submit a Lab Test Report of ICSA/Gartner of your product quoted by you.
- iii. Please submit detailed literature along with make, model, topology, design, data sheets, pamphlets and performance curves as applicable.

c. Price bid: (Sealed Packet-3)

The envelope super-scribing "Packet-3: Price Bid" price bid shall specify the following

- i. Quote as per Annexure-II and Optional Items as mentioned in the Technical Bid Sheet in the respective Price proforma. Price may be quoted against other items as required to the best of your knowledge for the concerned requirement.

Price and its Validity

- 18. The bidder shall quote rate per unit item. However, the University may increase or decrease the quantity before placing the order, without assigning any reason thereof.
- 19. The tender shall contain the firm and final rates in clear and unambiguous terms in Indian Rupees Currency.
- 20. The quoted price must be inclusive of all taxes including GST as per the Government norms, freight, packing, forwarding, transit insurance etc. and must be shown clearly against each entity for delivery at site. The installation, commissioning and demonstration and training shall be at the supplier cost.

Evaluation and Award of Contract

- 21. There will be a pre-bid meeting on 21.10.2019 at 11.00 AM to comply the queries
- 22. On all the matters relating to this tender call document, the decision of the University shall be final and binding and the same cannot be referred and reinforced to the court of law.

23. The University reserves the right to reject/cancel any or all of the tender without assigning any reason thereof.
24. The University is not bound to go for Lowest Tender on sufficient technical ground if decided by the DPC and UPC.
25. The University reserves the right to call the bidders and to conduct negotiations, if necessary and has the right to select more than one bidder for one or more items at its discretion. The bidders are advised to watch our web site for any queries.
26. Any deviation in technical specifications shall not be entertained ordinarily. The University reserves the right to modify the technical-specifications during the execution stage of the purchase process. Wherever the technical specifications of items are changed either at the University request or at Bidder's request, revised price will be fixed, if necessary, by negotiations and as agreed upon by both parties.
27. The University reserves the right to order all or part or none of the items and/or services given in this document.
28. The University may reject the bid even if, it is accepted but the successful bidder fails to execute any of the guidelines, terms and conditions mentioned in this tender document.
29. The University reserves the right to cancel the purchase order if the Next Generation firewall supplied fail to meet the specification mentioned within the terms and conditions of this tender call document.
30. The supplier shall not assign or makeover the contract, the benefit or burden thereof to any other person or persons or body corporate. The supplier shall not underlet or sublet to any person(s) or body corporate for the execution of the contract or any part thereof.

Delivery Period

31. All the items are to be door-delivered to the University within 4-5 weeks of the issue of the purchase order. In case the supplier fails to deliver the goods within the due period, the University reserves the right to cancel the purchase order and to place orders with other firms without assigning any reason thereof.
32. The supplier must supply all ordered items at a time. Part supplies are not acceptable and will not be entertained on any account. Any loss or damage during transit will be replaced at the cost of supplier.

Installation and Commissioning

33. The supplier shall be liable to complete all installation and commissioning of the Hardware at the site within 30 days from the date of receipt of goods. All packing must be opened at the site and

be handed over to the consignee, at the supplier's cost in presence of our Technical representatives or Professor I/C. CIF.

Warranty

34. The Hardware supplied will be under comprehensive warranty for a minimum period of 3 years or more than 3 Years offered by the Company, if any, from the date of installation and commissioning. The same may be extended suitably if the authority feels its necessity as per the satisfactory performance of the bidder/firm.

Support, Service and Maintenance

35. The successful bidder shall submit full detail address with phone no., fax no. and e-mail ID of the contact person for after sales service.
36. The Consignee shall not adopt Call Log procedure for call logging through IVR system of the OEM for service or complain launching.
37. The successful bidder is required to take care of change in technology and supply the higher version of the hardware available at the time of delivery at the same total cost as per the order. The operating manuals must be supplied at the time of delivery of goods.
38. The successful bidder shall submit all bills in triplicate on printed forms to the University. The billing must be done with GST billing norms.
39. The supplier must submit valid and up-to-date IT Clearance and GST Registration Certificate along with the bill before release of payment.
40. No interest on any deferred claim arising out of this purchase shall be payable in any case whatsoever. No payment will be made for goods rejected at site during installation and commissioning.
41. The 90% of the billed amount will be released only if the items have been received in good conditions and successful installation and commission of the Campus Networking and Installation of Next Generation Firewall (NGFW) as per the specifications along with other as per the work order issued by concerned authority.
42. The balance 10% will be released after 60 days of the satisfactory on site performance from the final date of installation and commissioning of all Hardware against the Bank Guarantee of 5% of total project value. All payments will be released based on separate invoices submitted to the university by the supplier. The supplier shall submit the bills in triplicate on printed forms only for the release of the balance 10% amount to the University.
43. The bidder must include 3 years of 7x24 hardware & software support, threat intelligence subscription and any other annual fee required as part of the bidder's solution.

44. The bidder will execute four post implementation Health Checks on a quarterly basis per year to ensure that the solution is configured and performing optimally on the site.

Other Terms & Conditions

- 45. All bidders should watch and follow everyday our website www.vssut.ac.in for any updation.
- 46. The University shall not be held responsible for any loss or damage suffered by the bidder.
- 47. The University reserves the right to cancel an item as ordered or cancel the whole order, if the University does not agree to a change of specification suggested by the bidder or if the bidder is not able to supply an item as per changed specifications required by the University or if there is no agreement on the revision to price.
- 48. Any dispute arising out of the deal shall be subjected to the jurisdiction of the court at Sambalpur within the State of Odisha.
- 49. The University reserves the right to add/delete/change any of the terms and conditions stipulated in this tender document.
- 50. On arise of any queries regarding the technical specification the authority may call and ask to the concerned bidder for clarification.
- 51. Any queries regarding the Tender Process the bidders may contact PIC, CIF, VSSUT @ 9861173326.

Delivery as well as Billing Address

The Registrar
Veer Surendra Sai University of Technology, Odisha
BURLA-768018
Dist. Sambalpur (Odisha)

Item-1. Next Generation Enterprise Firewall

SI	Features	Specifications	Bidder's Compliance			Additional Features available if any?
			Yes	No	Remarks if No	
1	Quality	a The proposed vendor must be in the Leader's quadrant of the Enterprise Firewalls Gartner Magic Quadrant as per the latest report & the Firewall should be ICSA certified				
		b The proposed vendor must have successfully completed NSS Labs' NGFW Methodology testing (2019) above 95% of exploit blocking rate.				
2	Enclosure Type	a 19-in rack mountable (Brackets included), Max: 2RU or more				
3	Architecture	a The firewall should be appliance based rack mountable firewall.				
		b Proposed Firewall should be ASIC based in nature or can be open architecture based on multi-core CPU's to protect & scale against dynamic latest security threats.				
4	Interface Requirement	a The device should have a minimum of 6x 10GE SFP+ Interface slots & 8x 1GE SFP interface slots & 10x 1GE RJ45 interfaces from day one				
		b Should have 1 Console port.				
		c Should have fiber and copper connection provision.				
5	Performance Parameters	a Next Generation Firewall throughput (measured with Firewall, IPS & Application Control enabled on Real World or Enterprise Mix Traffic) – 8 Gbps				
		b minimum concurrent connection >= 6 Million				
		c Minimum New connections per second >= 3,50,000				
		d SSL Inspection Throughput should be minimum 08 Gbps				
		e Threat Prevention throughput (measured with Firewall, IPS & Application Control enabled on Real World or Enterprise Mix Traffic) – 6 Gbps				

SI	Features	Specifications	Bidder's Compliance			Additional Features available if any?
			Yes	No	Remarks if No	
		g IPS throughput should be minimum 10 Gbps				
		h Appliance latency should not be more than 03 μs				
		i Firewall should support minimum VLANS 4096				
		j The device should support 16GB RAM or more from day one				
		k The Firewall should have hot swappable Redundant Power Supply from day one				
		l Firewall should have high availability Active/Active and Active/Standby				
6	Security Features.....	a The proposed system should be able to block, allow file by file extension and size				
		b The System should be able to scan following Protocols:				
		HTTP and HTTPS				
		SMTP and SMTPS				
		POP3 and POP3S				
		IMAP, IMAPS				
		c Botnet server IP blocking with global IP reputation database				
		d The proposed system shall provide ability to allow and block attachments or downloads according to file extensions and/or file types				
		e Web filtering inspection				
		f Manually defined web filtering based on URL, web content and MIME header				
g Dynamic web filtering with cloud-based real-time categorization database:						

SI	Features	Specifications	Bidder's Compliance			Additional Features available if any?
			Yes	No	Remarks if No	
		h Additional features of web filtering:- - Filter Java Applet, ActiveX, and/or cookie - Block HTTP Post - Log search keywords - Rate images by URL - Block HTTP redirects by rating - Exempt scanning encrypted connections on certain categories for privacy				
		i Web filtering local categories & category rating override				
		j Web filtering profile override: Allows administrator to temporarily assign different profiles to user/user group/IP				
		k Deep application control over popular public cloud services, such as Salesforce, Google Docs, and Dropbox				
		l Proxy avoidance prevention: Proxy site category blocking, rate URLs by domain & IP address, block redirects from cache & translation sites, proxy avoidance application blocking (application control), proxy behavior blocking (IPS)				
		m Should have a built-in Signature and Anomaly based IPS engine on the same unit IPS Signature support from day one				
		n Able to provide DDoS and DoS anomaly detection and protection mechanism				
Security Features	o Signature based detection using real time updated database				
		p Anomaly based detection that is based on thresholds				
		q The device shall allow administrators to create Custom IPS signatures				

SI	Features	Specifications	Bidder's Compliance			Additional Features available if any?
			Yes	No	Remarks if No	
		r Should be configurable IPS filters to selectively implement signatures, based on severity, target (client/server), protocol, OS and Application types.				
		s Supports automatic security updates directly over the internet. (ie no dependency of any intermediate device)				
		t Supports attack recognition inside IPv6 encapsulated packets.				
		u Supports user-defined signatures				
		v Supports several prevention techniques including drop-packet, tcp-rst (Client, Server & both) etc. List all prevention options				
		w Should support detection of applications: Botnet, Collaboration, Email, File Sharing, Game, General Interest, Network Service, P2P, Proxy, Remote Access, Social Media, Storage Backup, Update, Video/Audio, VoIP, Industrial, Special, Web (Others) etc.				
		x Custom application signature support.				
		y Filter-based selection: By behavior, category, popularity, technology, risk, vendor, and/or protocol etc.				
		z Actions: Allow, block, reset session, monitor only.				
		A Device should support SSH Inspection.				
		B Should support DLP message filter: - Protocol supported: HTTP-POST, SMTP, POP3, IMAP, MAPI, NNTP, etc - Actions: Log only, block, quarantine user/IP/Interface				
7	Policy Creation & Management	a The device should provide detailed policy definition and management such as (but not limited to):				
		b - Assign Users/User group				

SI	Features	Specifications	Bidder's Compliance			Additional Features available if any?
			Yes	No	Remarks if No	
		- Assign Allowed and Denied URL categories				
		- Assign Time of access				
		The device should provide policy compliance triggers such as (but not limited to)				
		-Alert user and Allow				
		-Allow and Log				
		-Block and Log				
8	VPN Requirements	a IPSEC VPN performance should be minimum 10 Gbps				
		b It should support the IPsec VPN for both site-site and remote access VPN				
		c Must support upto 2000 IPsec concurrent VPN users without any performance degradation from day one				
		d Concurrent SSL-VPN Users support should be min. 2000				
		e Firewall should support IPsec NAT traversal.				
		f IPsec & SSL both the VPN functionality should be ICSA certified				
		g Firewall system should support virtual tunnel interfaces to provision route-based IPsec VPN				
9	Management & Reporting Features	a Support for Built-in Management Software for simple, secure remote management of the security appliances through integrated, Web-based GUI.				
		b Support accessible through variety of methods, including console port, Telnet, and SSHv2				
		c Support for both SNMPv2 and SNMPv2c, providing in-depth visibility into the status of appliances.				
		d Should support the report generation on a manual or schedule (Daily, Weekly, Monthly, etc.) basis & Should be able to create custom report base on				

SI	Features	Specifications	Bidder's Compliance			Additional Features available if any?
			Yes	No	Remarks if No	
		custom query base any logging attributes or the device should have real time monitoring system.				
		e Should have separate appliance based real time logging with minimum 4TB of log storing capacity & 20GB/day log taking capacity for all Traffic, Threats, User IDs, URL filtering, Data filtering, Content filtering, Tunneled Traffic and correlated log view base on other logging activities				
		f Should have capability to import configuration and software files for rapid provisioning and deployment using Trivial File Transfer Protocol (TFTP), HTTP, HTTPS				
		g Should allow the report to be exported into other format such as PDF, HTML, CSV, XML etc.				
		h Support for out-of-band management through a dedicated management interface				
		i Support Packet Capturing for powerful troubleshooting capabilities by providing robust packet-capturing facilities				
		j Should capable to provides a convenient method for alerting administrators when critical events are encountered, by sending e-mail alert messages to administrator defined e-mail addresses				
10	Routing Protocols	a Should have Static Routing Protocols				
		b Should have Policy based routing Protocols				
		c The Firewall should support Dynamic Routing Protocols for OSPF, OSPFv3, BGP4, ISIS, RIPng				
11	Optional					
		a Should support DLP file filter: - Protocols Supported: HTTP-POST, HTTP=-GET,SMTP, POP3, IMAP, MAPI, FTP, NNTP - Filter options: size, file type, content, encrypted				

SI	Features	Specifications	Bidder's Compliance			Additional Features available if any?
			Yes	No	Remarks if No	
		b DLP watermarking: -Should allow filter of files that pass through the unit and contain a corporate identifier (a text string) and a sensitivity level (Critical, Private, and Warning) hidden in a watermark. -Support Windows and Linux free watermarking tools.				
		c DLP fingerprinting: -Should generate a checksum fingerprint from intercepted files and compare it to those in the fingerprint database.				
		d DLP archiving: -Should record full content in email, FTP, IM, NNTP, and web traffic etc				
		e Should support Explicit web & FTP proxy: FTP, HTTP, and HTTPS proxying on one or more interfaces				
		f Proxy auto-config (PAC): Should provide automatic proxy configurations for explicit web proxy users.				
		g Proxy chaining: Should capable of web proxy forwarding to redirect web proxy sessions to other proxy servers.				
		h Should do web proxy forwarding server monitoring and health checking system.				
		i Should have IP reflect capability.				
		j Should have load balancing for forward proxy and proxy chaining internal servers				
		k Explicit web proxy authentication: Should give IP-Based authentication and per session authentication				
		l Web caching: Object caching that accelerates web applications and web servers by reducing bandwidth usage, server load, and perceived latency. Supports				

SI	Features	Specifications	Bidder's Compliance			Additional Features available if any?
			Yes	No	Remarks if No	
		caching of HTTP 1.0 and HTTP 1.1 web sites.				
		m SSL Offloading with Web caching: Full mode: Performs both decryption and encryption of the HTTPS traffic. Half mode: Only performs one encryption or decryption action.				
		n Should have option to exempt certain web sites from web caching with URL patterns.				
		o Should support advanced web caching configurations and options: - Always revalidate, Max cache object size, negative response duration, fresh factor, Max/Min/Default TTL, proxy FQDN, Max HTTP request/message length, ignore options, cache expired objects, revalidated pramano-cache				
		p Should support LDAP, RADIUS, Windows AD, PKI based Authentication & should have integrated 2-Factor Authentication server support & this two factor authentication can be used for accessing internal network from outside and for Local users accessing internet from inside the network and for administrative access to the appliance or all of them				
12	Make	To be mentioned by the bidder				
13	Model	To be mentioned by the bidder				
14	Country of Origin	To be mentioned by the bidder				
15	URL Reference	To be mentioned by the bidder (if interested)				

Item-2. 24 Port POE Layer 2 Edge switches

SI	Specifications	Bidder's Compliance			Additional Features available if any?
		Yes	No	Remarks if No	
1	The switch should be 19" rack mountable with 1 RU maximum height				
2	The Switch should be minimum 24 port 10/100/1000 Mops full duplex auto sensing Ports with additional 4x 10G SFP+ Ports				
3	Switching Fabric/Backplane Bandwidth: Non-Blocking Architecture minimum 128 Gbps & through put more than 95.2 Mpps.				
4	POE Budget – 380 watts.				
5	The switch should support full layer 2 and basic L3 features like: SNMP v1 v2 v3, RMON, VLAN, Static Routes, MAC address, QoS.				
6	The switch should support all Ethernet IEEE 802 standards like IEEE 802.3x. IEEE802.3ad, IEEE 802.1d , IEEE802.1w, IEEE802.1s (multiple stp), IEEE802.1x, IEEE802.1 p, IEEE 802.1q, IEEE802.3ab (LLDP MED), IEEE802.3az etc.				
7	The switch should support Port Security, Dynamic ARP Inspection, Ip Source Guard, ACLs, Private VLANs and support Integration of security policies (NAG, Ips.) across the wired networks enables quick diagnosing and resolution of security threats				
8	The switch should support Port / Link Aggregation up to 8 ports, Port Mirroring, 802.1 x Port Based Authentication, DHCP Support, inter VLAN routing enabled, VRRP.ECM				
9	The switch should support minimum 1 K VLANs, 16K MAC Addresses, 8 QoS per Port				
10	The switch should be Ipv6 ready (H/W & S/W) for all layer 2 and basic layer 3 from day One				
11	The switch should have Console Port.				
12	The switch should be Modular OS / Latest enterprise class OS to support full layer 2 & 3 features				
13	The switch should be EAL or NDPP Certified				
14	The switch should have Console Port.				
15	Web console, SSH server (SSH-2), SCP, SFTP, RS232 and Dual firmware and configuration rollback and saving of multiple configuration.				
16	Traffic flow analysis, port traffic limiting.				
17	Comprehensive warranty for 3 years onsite.				

SI	Specifications	Bidder's Compliance			Additional Features available if any?
		Yes	No	Remarks if No	
18	Should work seamlessly between 0°C to 45°C and on humidity up to 95°C non- condensing.				
19	Should adhere to current safety and emission norms.				
20	The OEM should be in the leader's quadrant of the Gartner's magic Quadrant for enterprise networking LAN published in 2018				
SFP Module					
1	All the Transceivers/Modules used to connect the Switches should be from the same OEM/make of the switches only.				
2	Single mode - Media Type, Wave length- 1310 nm, Min. Data rate 1 Gbps.				
3	Distance support - Min 10 Km.				
4	Connector LC Type, Hot swap architecture.				
5	FO Module should be MSA compliant.				
6	Min. operating temperature range: 0 °C to 50 °C.				

Item-3. Point to Point 600 MBPS Radio Frequency Link

SI	Specifications	Bidder's Compliance			Additional Features available if any?
		Yes	No	Remarks if No	
1	System must operate in unlicensed band frequency spectrum of ISM-III Unlicensed band. Operating frequency range: 5 GHz: 4910 – 5970 MHz (exact frequencies as allowed by local regulations)				
2	System should employ bandwidth per channel of 20 MHz, 40 MHz and 80 MHz				
3	System efficiency should be at least 8.75 bps/Hz in a 20MHz, 40 Mhz and 80Mhz channel size				
4	System must support actual aggregate throughput of more than 600+ Mbps				
5	System Should support IPv4/IPv6 Dual Stack				
6	System Should support 10/100/1000 BaseT				
7	Transmit power standard of system should be minimum 27 dBm with 1 dBm interval				
8	Transmit power should employ automatic power back off (Automatic Transmit Power Control).System should				

Sl	Specifications	Bidder's Compliance			Additional Features available if any?
		Yes	No	Remarks if No	
	change TX power in accordance with required received signal.				
9	Rx sensitivity of the system must be -87 dBm or better				
10	System should support Online spectrum analyzer				
11	System should have the capability to adapt the hitless modulation mode depending on the link environment ensure best throughput while maintaining the link despite drop in link budget due to NLOS situation. Modulation level shall be dynamically adaptive between MCS0(BPSK)to MCS9 (256QAM5/6)				
12	System Should support 65000 PPS				
13	System must support the MTU size of 1700 Bytes				
14	System Should support Spanning tree protocol for Layer 2 redundancy				
15	System Should support DHCP server and client functionality				
16	System should also define the priority of Broadcast, Multicast and voice traffic and rate limiting for broadcast traffic.				
17	System should support Encryption128-bit AES (CCMP mode)				
18	System should also support a management VLAN and data vlan for further security Measure				
19	System must have the ability to tag vlan as per requirement				
20	System should support the Layer 2 and layer 3 firewall based on source and destination to protect from any security breach				
21	System should also provide the filtering on basis of specific TCP port				
22	System must support deice event log				
23	Software upgrade to system is done over the air as well as through the network				
24	System should have integrated 25 dBi Antenna				
25	System should provide the complete statistic of Ethernet and wireless with detail of send/receive packet of unicast, multicast and broadcast				

Sl	Specifications	Bidder's Compliance			Additional Features available if any?
		Yes	No	Remarks if No	
26	System must support the syslog feature				
27	System must support the basic troubleshooting feature such as Ping, Traceroute				
28	Operating Temperature -30°C to +60°C (-22°F to +140°F)				
29	System must have inbuilt surge suppressor of 1 Joule				
30	System should have at least IP 55 environmental protection				
31	Maximum power consumption should not exceed 12 W.				
32	Antenna Frequency Range 4910 - 5970 MHz				
33	System should have 3dB Beam width-Azimuth 6-10 degrees				
34	System should have 3dB Beam width-Elevation 6-10 degrees				
35	System should have Front-To-Back Isolation 25 dB				
36	System should have Cross Polarization 20 dB				
37	Certifications: System, should have following certification to ensure regulation FCCID Z8H89FT0017 Industry Canada Cert 109W-0017CE EN 301 893 V2.1.1 (5.4 GHz), EN 302 502 V2.1.1 (5.8 GHz)				

Item-4. Passive Items

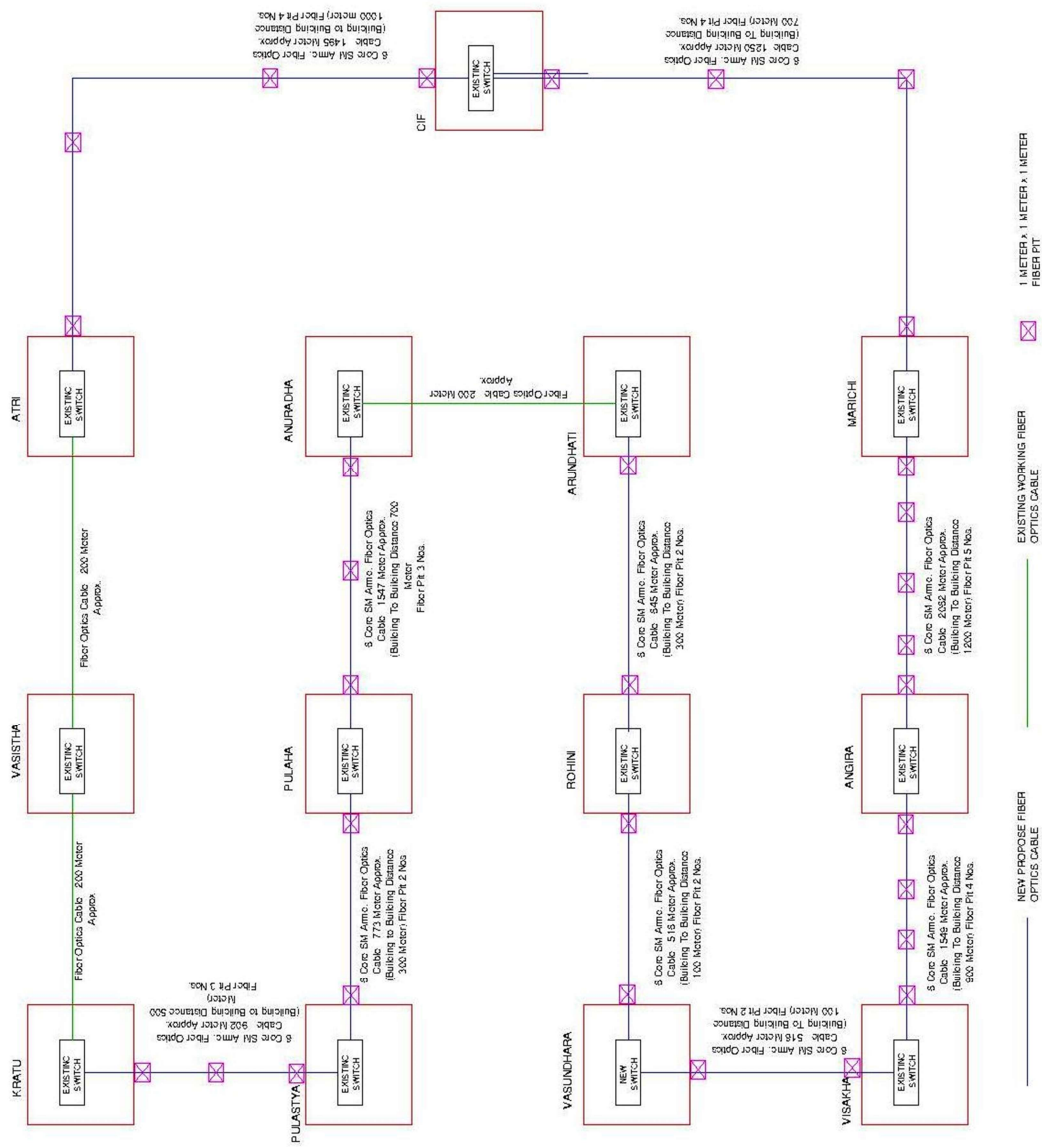
Sl	Parameters	Specifications	Bidder's Compliance			Additional Features available if any?
			Yes	No	Remarks if No	
1	6 Core- Single Mode Outdoor Armored OFC Cable					
	Fiber Mode	6				
	Construction Type	Multi Loose Tube				
	No of Fiber per Loose Tube	6				
	Total Tubes	6				
	Type of cable	Single Mode Outdoor Fiber				
	Core/Cladding diameter	9/125 micron				

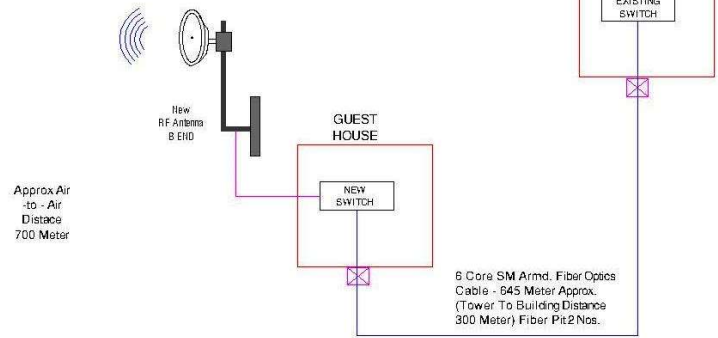
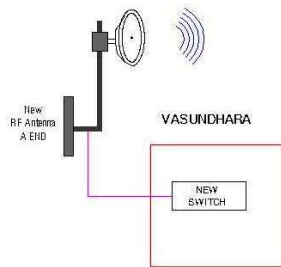
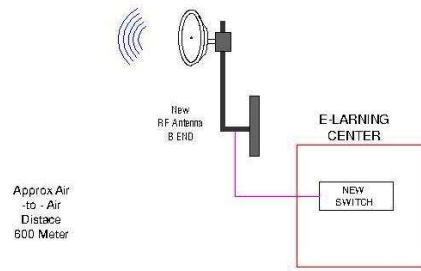
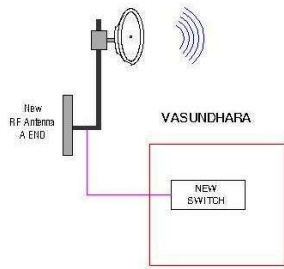
SI	Parameters	Specifications	Bidder's Compliance			Additional Features available if any?
			Yes	No	Remarks if No	
	Attenuation	$\leq 0.35\text{dB/km}$ at 1310nm				
		$\leq 0.21\text{dB/km}$ at 1550nm				
	Coating/cladding concentricity error	$\leq 12\mu\text{m}$				
	Zero dispersion slope	$\leq 0.092\text{ps}/(\text{nm}^2\cdot\text{km})$				
	Zero dispersion wavelength	1300~1324 nm				
	Polarization mode dispersion	$\leq 0.20 \text{ ps}/\sqrt{\text{km}}$				
	Mode field diameter	1310nm : $9.0\pm 0.4\mu\text{m}$				
	Cut-off wavelength λ_{cc}	$\leq 1260\text{nm}$				
	Chromatic dispersion	1288~1339nm $\leq 3.4\text{ps}(\text{nm}\cdot\text{km})$				
		1271~1360nm $\leq 5.3\text{ps}(\text{nm}\cdot\text{km})$				
		1550nm $\leq 18 \text{ ps}/(\text{nm}\cdot\text{km})$				
		1625nm $\leq 22 \text{ ps}/(\text{nm}\cdot\text{km})$				
	Standards	ITU G.652, TIA OS2, IEC B1.3				
	Armour	ECCS-Corrugated, Chrome Plated Co-polymer Steel Tape				
	Central Strength Member	FRP Rod				
	Tube Filling Compound	Thixotropic Jelly				
	Outer Sheath	HDPE Outer Sheath, Black				
	Outer Sheath Diameter	1.80 mm				
	Cable Bending Radius	20 /10 x D, D=Cable Diameter				
	Repeated Bending	30 Cycle, $r= 20xD$, 5 kg Load, D=Cable Diameter				
	Tensile Force	Short Term 600 N /Long Term 1500 N				
	Crush Resistance	Short Term 300 N / Long Term 1000 N				
	Operation Temperature	-40° to +70°C				
	Storage Temperature	-40° to +70°C				
	Nominal Cable Weight (Kg/Km)	107				

Sl	Parameters	Specifications	Bidder's Compliance			Additional Features available if any?
			Yes	No	Remarks if No	
	Nominal Cable Diameter (mm)	9.5				
	Standard Length per Drum (Mtr)	2000 ± 10				
2 OFC Patch Panel (6 port and 24 port)						
	2 cut out or 4 Cut outs Sliding Patch Panels					
	Available either loaded or unloaded					
	High quality construction and finish					
	Shall be Equipped with Future Expansion Blank Plate					
	Simplex or Duplex variants					
	Panels with numbered ports					
	Complete with Fibre management kit					
	Available in MM and SM					
	Coupling options: FC, SC, ST, LC					
	Available in different sizes 1U, 2U					
3 OFC Patch Cords-Single Mode -OS2						
	Fiber Mode	Single Mode				
	Insertion Loss (in dB)	≤0.2				
	Return Loss (in dB)	≥45dB (PC), ≥50dB (UPC), ≥60dB (APC)				
	Temperature (°C)	-40~+85				
	Repeatability (dB)	≤0.1				
	Durability (dB)	≤0.2 (1000 mattings)				
	Cable Diameter)(mm)	2.0mm				
	Ferrule Material	Zirconium Ceramic				
	All Assemblies are machine polished providing highest					

SI	Parameters	Specifications	Bidder's Compliance			Additional Features available if any?
			Yes	No	Remarks if No	
	quality					
	Compliant with telecordia GR-326 core, TIA/EIA & IEC.					
	Available in PC, UPC, APC connectors with .9mm, 2mm, 3mm sizes.					
	Duplex and Simplex versions, Uniform and hybrid patch cord versions available.					
	All assemblies are factory testing and comes with test reports.					
4 Cat6 SF/UTP Cable - Indoor Cable						
	Type of cable	4 -Pair Over all Shielded and Foiled and Unshielded Twisted pair Cable				
	Over all Shielding # 1	Alloy Braiding				
	Over all Shielding # 2	Polyester /Aluminum Mylar Tape				
	Support	1000 Base-T Gigabit Ethernet Standard				
	Conductors	Material: Bare solid Copper				
		AWG : 23				
		Size : 0.55. ±0.02				
	Insulation	Diameter : 1.02 ± 0.03mm				
		Material : High Density Poly Ethylene (HDPE)				
	Jacket	External OD : 6.80 mm Approximately				
		Material : LSZH				
	Supply	Roll of 305 Metres per Box				
	Standards	TIA/EIA 568 C.2				
		ISO/IEC 11801				
	Frequency	250 MHz				
	Suitable	Horizontal and Backbone connectivity				

SI	Parameters	Specifications	Bidder's Compliance			Additional Features available if any?
			Yes	No	Remarks if No	
	Center cross	Poly Ethylene (PE)				
	operating Temperature	-17°C to +60°C				
	Pairs	Two Insulated conductors Twisted together to form pair				
	Twisting	4 pairs laid together and separated by cross element				
	Conductor Resistance	Max. 9.38 Ω/100m				
	Conductor Resistance Unbalance	Max. 4 %				
	Mutual Capacitance	Max. 5.6 nF/100m				
	Bending radius	4 x overall diameter (min.)				
	Breaking strength	400 N (max.)				
	Capacitance Earth Unbalance	Max. 330 pF/100m				
	Propagation Delay @ 1, 10, 100 & 250 MHz	Max. 570, 545, 538 & 536 ns/100 m				
	Propagation Delay Skew 1 – 250 MHz	Max. 45 ns/100 m				
	Certification	ETL Verified, RoHS Compliant, UL Listed				
5 Wall Mount Network Rack						
	Size	9U				
	Dimension	500W x 450D				
	Front Door	Glass door (Tinted Toughened) with Lock & Key				
	Mounting Rails	2 Pairs of 19" Mounting Rails				
	Standard Accessories:	1U Cable Manager (1), Hardware Packet (1 Pkt), 6 Socket 5 Amp, Power Distribution Unit (1 No.), Roof Mounted Fan Unit / 90 CFM / 230V AC (1 No.)				





Financial Bid Proforma: Annex-II

The Financial Bid may be submitted as per the technical specifications covering all requirements for the installation and commission of the items.

Name of the OEM/Business Partner of OEM/ Authorized Dealer:

Price Bid Format

Product	Sl. No	Description	Qty.	UOM	Basic Unit Price	Total Basic price	GST @ 5%	Total Price with GST
Item-1. NGFW	1	NGFW with redundant AC power supplies	2	No				
	2	10GE SFP+ transceiver module, short range	2	No				
	3	1GE SFP SX transceiver module	2	No				
	4	3 years subscription for Application Control, IPS, AV, Web Filtering and other needful licenses as per the RFP specification	1	No				
	5	24X 7 Support Contract with OEM TAC	1	No				
	6	Others as per requirement (if any)						
Item-2. Switch	1	24 10/100/1000BASE-T(370Watt) POE+, 4 SFP combo,4 1GbE unpopulated SFP, upgradable to 10GbE SFP+, 1 Fixed AC PSU, 1 RPS port managed switch with 3 Years Warranty	3	Nos.				
	2	1000BASE-LX SFP, MMF 220 & 550 meters, SMF 10km, LC connector, Industrial Temp	12	nos.				
Item-3. RF Component	1	Point to Point 600 MBPS RF Link+ PoE + Antenna+ Gigabit Surge Suppressor	4	Nos.				
	2	6 meter Tower on building rooftop using galvanized self-supporting pipe based	3	No				
	6	Earthing pit for RF Tower	3	Set				
	7	Surge Suppressor copper grounding wire	120	Mtr.				
Item-4. Passive Component	1	High Link Optic- 6 Fibres, Armoured, Uni-loose Tube Cable,OS2 9/125	12000	Mtr.				
	2	6 Port-Sliding Patch Panel-1U, 2c/o with Future Ready 1BP, 3LCD x1P, 6LC Pigtails - OS2 9/125	11	Nos				
	3	24 Port-Sliding Patch Panel-1U, 2c/o 6LCD x2P, 24 LC Pigtails -OS2 9/125	1	Nos				
	4	High Link Optic SC- UPC - LC-UPC Duplex Patch Cords,OS2 9/125 -3 Mtrs	22	Nos				
	5	Cat6 SF/UTP Cable	1	Box				

Product	Sl. No	Description	Qty.	UOM	Basic Unit Price	Total Basic price	GST @ 5%	Total Price with GST
	6	Supply, Delivery & Installation of Wall Mount 9U x 500W x 450D Front Glass door (Tinted Toughened) with Lock & Key, 2 Pairs of 19" Mounting Rails Standard Accessories: 1U Cable Manager (1), Hardware Packet (1 Pkt), 6 Socket 5 Amp, Power Distribution Unit (1 No.), Roof Mounted Fan Unit / 90 CFM / 230V AC(1 No.)	3	Nos				
Service	1	Laying of 6 Core Armoured SM Fibre Cable with 32-40 mm HDPE Pipe through HDD machine - 1 Mtr Depth as per Standard Specs.	8500	Mtrs				
	2	Installation of LIUs (6 ports) in Racks	11	Nos				
	3	Installation of LIUs (12 ports) in Racks	1	Nos				
	4	Splicing of Optical Fibre Cable per core	150	Nos				
	5	Fibre Testing with OTDR per core & Site certification	66	Nos				
	6	Laying of 4 pair Cat6 STP Cable through PVC Conduit / Flexible pipe	305	Mtrs				
	8	Laying of HDPE Pipe with 6 core Fiber (Inter Building)	3500	Mtrs				
	9	Fixing of Route Marker	50	Nos				
	10	1m x 1m x 1m Manhole Supply with installation	33	Nos				
	11	Installation of RF Link	2	Set				

N.B. 1. The above-mentioned products should be quoted with 3 Years onsite warranty.

2. VSSUT will provide DSIR Certificate to avail GST @ 5%.

Information Sheet of the Bidder: Annex-III

S/L	Description		To be filled in by the supplier
1.	Name of the Firm (Bidder) or OEM/Business Partner/Authorized Dealer		
2.	Address with phone No./FAX/ e-Mail		
3.	Contact Person(s) Phone No. /Mobile No./Alternate Mobile Number		
4.	Name of the OEM/Business Partner /Authorized Dealer		
5.	PAN of the OEM/Registered Firm		
6.	Details of Bank Draft towards the cost of tender documents	Issuing Bank : Branch Name : Branch Code : DD No. : Date of Issue : Payable at : Validity : Date of Expiry :	
7.	Details of Bank Draft towards EMD	Issuing Bank : Branch Name : Branch Code : DD No. : Date of Issue : Payable at : Validity : Date of Expiry :	
8.	GST Registration details		

DECLARARION: We hereby certify that the information furnished above is full and correct to the best of our knowledge. We understand that in case any deviation is found in the above statement at any stage, the tender is liable to be rejected.

Authorized Signature with Stamp

Undertaking by the Bidder for unconditional acceptance of Terms & Conditions: Annex-IV

To

The Registrar,
Veer Surendra Sai University of Technology,
Burla-768018.
Dist- Sambalpur, Odisha.

Subject. Tender document for Campus Networking and Installation of Next Generation Firewall

Dear Sir,

We have studied and gone through the full content of the tender call document and agree to quote by the guidelines, terms and conditions laid in this tender document and we hereby accept **unconditionally** all the terms and conditions laid in the tender call document published in the website

In case of non-observance of any of the guidelines, terms and conditions mentioned in this tender document by us, we understand that our tender/purchase order (as the case may be) may be cancelled.

We warrant that the goods supplied under this contract as per complete technical specifications laid in the Annexure of this tender call notice are new, unused, of the most recent or current models, and they incorporate all recent improvements in design and materials and all the services configured shall render trouble free function with respect to hardware and software.

We hereby agree to supply, install and commission of all the Hardware, software and license items as per the terms and conditions of this tender call document if we are offered to execute the contract.

Signature of.....

In capacity of.....

Seal

Duly authorized to sign the tender for and on behalf of

Seal