

**Pre bid clarifications for SITC of Data Networking System.**  
**for Institute of Nano Science & Technology at Sector-81, Knowledge City, Mohali (Punjab)**  
**No. 15(6)/2019-INST/922** **Dated 05-08-2019**

S.No	Specifications	Complied(Yes/No) / Remarks	Justification/Suggestion	INST Clarifications	
1	<b>1</b>	<b>Industry Certifications and Evaluations</b>			
		Firewall solution offered from OEM must be rated as leaders in the latest Magic Quadrant for Enterprise Firewall and NGIPS published by Gartner	Partially Complied	Since requirement is for NGFW, Why NGIPS Gartner has been asked.so ammend the clause (Firewall solution offered from OEM must be rated as leaders in the latest Magic Quadrant for Enterprise Firewall) for more participation	<b>Suggestion accepted</b>
2	<b>2</b>	<b>Hardware Architecture</b>			
		The appliance based security platform should be capable of providing NGFW capability (firewall, application visibility, and IPS functionality) and Advance malware,URL filtering in a single appliance	Yes		
		The appliance should support atleast 8 * 10 Gigabit Ethernet SFP+ ports from Day one and should be scalable to additional 8 x 10G or 4 x 40G ports. Required 10G DAC/ Transceiver should be loaded from Day-1.	Yes		
		The appliance hardware should be a multicore CPU architecture with a hardened 64 bit operating system to support higher memory	No	Please mention the RAM for the sizing	
		Proposed Firewall should not be proprietary ASIC based in nature & should be open architecture based on multi-core cpu's to protect & scale against dynamic latest security threats.	No	Every OEM has its own and unique Architecture (Multicore/Asic) and ASIC has better throughput over multicore so request you to kindly ammend the clause Proposed (Firewall should support multicore/ ASIC architecture) for more participation.	
3	<b>3</b>	<b>Performance &amp; Scalability</b>			
		Should support atleast 12Gbps of FW performance throughput (includes FW & Application Visibility )	Yes	Firewall Throughput is on lower side you should asked for Should support atleast 80 Gbps of FW performance throughput	No change
		Should support at least 10 Gbps of NGFW performance throughput (includes IPS + Application Visibility)	Yes	NGFW throughput is on lower side for such a big network so we recommend you to ask at least 20 Gbps of throughput	No change
		L7 Firewall and NGFW throughput difference should not be more than 70%		You have not asked Threat Protection throughput which is combination of all the security modules enabled so we request you to kindly ask for atleast 10 Gbps of Threat Protection Throughput	No change
		NG Firewall should support at least 9 million concurrent session	Yes	Concurrent session are on lower side you should ask for atleast 50 Million	No change
		NG Firewall should support at least 68000 connections per second with Application visibility	Yes	New session per second are very low as per your network so we recommend to increase the new session to 400,000 per second	No change
4	<b>4</b>	<b>High-Availability Features</b>			
		Firewall should support Active/Standby failover	Yes		
		Firewall should support etherchannel functionality for the failover control & data interfaces for provide additional level of redundancy	Yes		
		Firewall should support redundant interfaces to provide interface level redundancy before device failover	Yes		
		Firewall should support 802.3ad Etherchannel functionality to increase the bandwidth for a segment.	Yes		
		Firewall should support VXLAN	Yes		
5	<b>5</b>	<b>NGFW Firewall Features</b>			
		Solution must be capable of passively gathering information about network hosts and their activities, such as operating system, services, open ports, client applications, and vulnerabilities, to assist with multiple activities, such as intrusion event data correlation, elimination of false positives, and policy compliance.	Yes		
		Firewall should support creating access-rules with IPv4 & IPv6 objects simultaneously	Yes		

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	Firewall should support operating in routed & transparent mode	Yes		
	Should support Static, RIP, OSPF, OSPFv3 and BGP	Yes		
	Firewall should support manual NAT and Auto-NAT, static nat, dynamic nat, dynamic pat	Yes		
	Firewall should support Nat66 (IPv6-to-IPv6), Nat 64 (IPv6-to-IPv4) & Nat46 (IPv4-to- IPv6) functionality	Yes		
	Firewall should support Multicast protocols like IGMP, PIM, etc			
	Should support security policies based on security group names in source or destination fields or both	Yes		
	Should support capability to limit bandwidth on basis of apps / groups, Networks / Geo, Ports, etc	Yes		
	Should be capable of dynamically tuning IDS/IPS sensors (e.g., selecting rules, configuring policies, updating policies, etc.) with minimal human intervention.	Yes		
	Should be capable of automatically providing the appropriate inspections and protections for traffic sent over non-standard communications ports.	Yes		
	Proposed solution should have capability block BOT/CnC conection (anti-bot) from day one	Yes		
	Should be able to link Active Directory and/or LDAP usernames to IP addresses related to suspected security events.	Yes		
	Should be capable of detecting and blocking IPv6 attacks.			
	Solution should support full-featured NBA capability to detect threats emerging from inside the network. This includes the ability to establish "normal" traffic baselines through flowanalysis techniques (e.g., NetFlow) and the ability to detect deviations from normal baselines. If the functionality not support on the same appliance, vendor can quote separate device for the same.	No (Specific point to Cisco)	Properity Point to Cisco (Please remove this Point)	<b>Suggestion accepted, point to be treated as deleted</b>
	The solution must provide IP reputation feed that comprised of several regularly updated collections of poor reputation of IP addresses determined by the proposed security vendor	Yes		
	Solution must support IP reputation intelligence feeds from third party and custom lists of IP addresses including a global blacklist.	Yes		
	Should must support URL and DNS threat intelligence feeds to protect against threats	Yes		
	Should support safe search and YouTube EDU enforcement	Yes		
	Solution must be capable of passively gathering details unique to mobile devices traffic to identify a wide variety of mobile operating systems, mobile applications and associated mobile device hardware.	Yes		
	Should support more than 4000 application layer and risk-based controls that can invoke tailored intrusion prevention system (IPS) threat detection policies to optimize security effectiveness.	Yes		
	Must be capable of providing network-based detection of malware by checking the disposition of known files in the cloud using the SHA-256 file-hash as they transit the network and capabilityto do dynamic analysis on-premise (if required in future) on purpose built-appliance. License not require from day one.	Yes		
	NGFW OEM must have its own threat intelligence analysis center and should use the global footprint of security deployments for more comprehensive network protection.	Yes		
	The detection engine should support capability of detecting and preventing a wide variety of threats (e.g., malware, network probes/reconnaissance, VoIP attacks, buffer overflows, P2P attacks, etc.).	Yes		

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	Should be able to identify attacks based on Geo-location and define policy to block on the basis of Geo-location	Yes		
	The detection engine should support the capability of detecting variants of known threats, as well as new threats	Yes		
	The detection engine must incorporate multiple approaches for detecting threats, including at a minimum exploit-based signatures, vulnerability-based rules, protocol anomaly detection, and behavioral anomaly detection techniques. Identify and explain each type of detection mechanism supported.	Yes		
	Should support Open based Application ID for access to community resources and ability to easily customize security to address new and specific threats and applications quickly	No	Properity Point to Cisco (Please remove this Point)	<b>Suggestion accepted, point to be treated as deleted</b>
	Proposed Firewall should have URL filtering with 80+ categories and more than 280 million URL database	Yes		
6	<b>6</b> <b>Management</b>			
	The management platform must be accessible via a web-based interface and ideally with no need for additional client software	Yes		
	The management platform must provide a highly customizable dashboard.	Yes		
	The management platform must be capable of integrating third party vulnerability information into threat policy adjustment routines and automated tuning workflows	Yes		
	The management platform must be capable of role-based administration, enabling different sets of views and configuration capabilities for different administrators subsequent to their authentication.	Yes		
	Should support REST API for monitoring and config programmability	Yes		
	The management platform must provide multiple report output types or formats, such as PDF, HTML, and CSV.	Yes		
	The management platform must support multiple mechanisms for issuing alerts (e.g., SNMP, e-mail, SYSLOG).	Yes		
	The management platform must provide robust reporting capabilities, including a selection of pre-defined reports and the ability for complete customization and generation of new reports.	Yes		
	The management platform must risk reports like advanced malware, attacks and network	Yes		
	The management platform must include an integration mechanism, preferably in the form of open APIs and/or standard interfaces, to enable events and log data to be shared with external network and security management applications, such as Security Information and Event Managers (SIEMs), and log management tools.	Yes		

	S.No	Specifications	Complied(Yes/No) / Remarks	Justification/Suggestion	INST Clarifications
7		<b>24 Port Edge Switch with SFP+ Uplink/</b>			
	1	The proposed switch should support minimum switching capacity / Forwarding rate of 128Gbps / 190 Mpps respectively with 4 x 10G uplinks		Request you to please change this to "The proposed switch should support minimum switching capacity / Forwarding rate of 128Gbps / 95 Mpps respectively with 4 x 10G uplinks" Which is as per standard and allow Major OEM to Bid.	No change
		<b>B) General Features</b>			
	1	The proposed switch must support fundamental features such as Layer 2, PBR, Routed Access (RIP, EIGRP Stub/OSPF - 1000 routes), BGP, BGP+, PIM Stub Multicast,		For edge level switch 1000 OSPF routes is very high and will never be used in real deployment hence request you to please change this to "The proposed switch must support fundamental features such as Layer 2, PBR, Routed Access (RIP, EIGRP Stub/OSPF - 200 routes), BGP, BGP+, PIM Stub Multicast," So that maior OEM can paticipate.	<b>Suggestion accepted</b>
	2	The proposed switch should be software defined networking capable and be able to atleast integrate easily with the SDN controller from the same OEM. Overall integration must offer critical benefits such as - 1. Real-time network & application visibility, monitoring / troubleshooting 2. Identify and resolve issues such as client connectivity etc 3. Automatic device provisioning such as configuration-push etc		Request you to please change this to "The proposed switch should be software defined networking capable and be able to at least integrate easily with the SDN controller from the same OEM/3rd Party . Overall integration must offer critical benefits such as - 1. Real-time network & application visibility, monitoring / troubleshooting 2. Identify and resolve issues such as client connectivity etc. 3. Automatic device provisioning such as configuration-push etc."	<b>Suggestion accepted</b>
8		<b>24 Port Edge Switch with SFP+ Uplink PoE</b>			
	1	The proposed switch should support minimum switching capacity / Forwarding rate of 128Gbps / 190 Mpps respectively with 4 x 10G uplinks		Request you to please change this to "The proposed switch should support minimum switching capacity / Forwarding rate of 128Gbps / 95 Mpps respectively with 4 x 10G uplinks" Which is as per standard and allow Major OEM to Bid.	No change
		<b>B) General Features</b>			
	1	The proposed switch must support fundamental features such as Layer 2, PBR, Routed Access (RIP, EIGRP Stub/OSPF - 1000 routes), BGP, BGP+, PIM Stub Multicast,		For edge level switch 1000 OSPF routes is very high and will never be used in real deployment hence request you to please change this to "The proposed switch must support fundamental features such as Layer 2, PBR, Routed Access (RIP, EIGRP Stub/OSPF - 200 routes), BGP, BGP+, PIM Stub Multicast." So that maior OEM canoaticipate.	<b>Suggestion accepted</b>
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	S.No		Specifications	Complied(Yes/No) / Remarks	Justification/Suggestion	INST Clarifications
9			<b>Distribution switch with 10G Ports</b>			
	4		The proposed switch should have minimum 4GB RAM and atleast 1GB Flash supporting all requested features without any performance impact.		All OEM have different HW and SW to run with full functionality, HPE doesn't need more than 2GB RAM and 512MB flash to run. Hence request you to please change this to "The proposed switch should have minimum 2GB RAM and at least 512MB Flash supporting all requested features without any performance impact." so that major OEM can participate.	No change
10			<b>Indoor Access Point: -</b>			
	3		Access Point shall support Console port that uses Standard Port (RJ-45) type connection		All OEM have different type of console to access their devices hence request you to please change this to "Access Point shall support Console port to access the AP " So that major OEM can participate.	<b>Suggestion accepted</b>
11	8	1.2 (A)	<p>The Contractors, who are not registered with CPWD but fulfil the following requirements, shall be eligible to apply. The definite proof from the appropriate authority not less than Executive Engineer or equivalent rank of having satisfactorily completed the works as mentioned below during the last Seven years ending previous day of last day of submission of Bid:</p> <p>Three similar completed works each costing not less than ₹4.25 Crore OR Two similar completed works each costing not less than ₹6.36 Crore OR One similar completed work costing not less than Rs.8.50 Crore</p>	<p>The Contractors, who are not registered with CPWD but fulfil the following requirements, shall be eligible to apply. The definite proof from the appropriate authority not less than Executive Engineer or equivalent rank of having satisfactorily completed the works as mentioned below during the last Seven years ending previous day of last day of submission of Bid:</p> <p>Three (only of) Networking Project completed each costing not less than ₹2.00 Crore OR Two (only of) Networking Project completed each costing not less than ₹3.00 Crore OR One (only of) Networking Project completed costing not less than Rs.6.00 Crore</p>	Our request was to enable SI to participate for project of this nature to meet with 60% of the proposed budget value instead of 80%.	No Change
12	8	1.3	The bidder should have had average annual financial turnover of ₹ 25.00 Crore on <b>construction works</b> during the last three years ending 31st march of 2019. The bidder shall submit these details as per Form- 'A' attached with NIT.	The bidder should have annual financial turnover of ₹ 50.00 Crore in the field of Information Technology and Communication during the last three years. The bidder shall submit these details as per Form- 'A' attached with NIT.	The SI should be capable enough to execute & support on his own for this network project and the mention of construction in this turnover clause must surly have been a typographical error and should be removed as it has no relevance with regards to technical expertise of the network.	The bidder should have had average annual financial turnover of ₹ 25.00 Crore in the field of <b>Information Technology and Communication</b> during the last three years ending 31st March of 2019. The bidder shall submit these details as per Form- 'A' attached with NIT
13	8	1.5	Solvency Certificate issued by a Scheduled Bank for ₹ 4.25 Crore or more, the solvency certificate should not be older than six months. The bidder shall submit these details as per, Form- 'B' attached with NIT.	To be removed	As the EMD (2062717/-), Performance Guarantee (5%) and Security Deposite (2.5%) is being asked for in the tender for submission at appropriate stages to cover for any type of defaults.	No Change
14		List of Approved Makes	Systimax / Corning/ AMP / Molex	R&M is one of the leading Passive cabling Brand in India and is being used in many Govt Institutes ( IIT Patan / IIM Kozokode/ IIT Mandi. Secondly AMP and SYSTIMAX are products supplied from same company i.e Commscope	Commscope (Systimax /AMP) / Corning/ Molex/ R&M	<b>Suggestion accepted- Commscope (Systimax /AMP) / Corning/ Molex/ R&amp;M</b>

	S.No		Specifications	Complied(Yes/No) / Remarks	Justification/Suggestion	INST Clarifications
15	1	<b>Specification for CAT 6 LSZH U/UTP Cable</b>				
			Should support a minimum of 4 connector Channel with a minimum 6 dB guaranteed NEXT over and above the standard TIA 568 C.2. Bidder to furnish 3 <sup>rd</sup> Party test report of minimum 16000 nodes all having above 6 dB NEXT margin from a single project. If required original file format may be required to be submitted.	This is specific to one OEM as request to remove third party test report .	Should support a minimum of 4 connector Channel with a minimum 6 dB guaranteed NEXT over and above the standard TIA 568 C.2	Should support a minimum of 4 connector Channel with a minimum 6 dB guaranteed NEXT over and above the standard TIA 568 C.2. all having above 6 dB NEXT margin from a single project. If required original file format may be required to be submitted.
			Should support 6 connector Channel with a minimum 4 db guaranteed NEXT. ETL or UL 6 Connector test report to be submitted demonstrating 6 connections.	Make it four connector which is standard and it should be ETL verified not simply ETL as most of the OEM there ETL certificate is expired so to check same ETL verification program or 3P lab testing is required	Should support 4 connector Channel verified by ETL/3P 4 Connector test report to be submitted demonstrating 4 connections.Certificate to be available on intertek or 3P website	Should support 4 connector Channel verified by ETL/3P 4 Connector test report to be submitted demonstrating 4 connections.Certificate to be available on intertek or 3P website
			The weight of the cable box of 1000 Feet should not be less than 25.6 lbs	Please remove this is OEM specific		
			Should have ETL verified CMR, CMG	Allow 3P lab as it is Denmark based lab mostly used by european manufacturer and make it CM rated	Should have ETL/3P verifiedCMR or CM, CMG and certificate to be available on third party website like intertek and 3P	Should have ETL/3P verifiedCMR or CM, CMG and certificate to be available on third party website like intertek and 3P
16	2	<b>Specification for Category 6 Gigabit Information Outlets</b>				
			The Category 6 outlets shall be capable of being installed at either a 45° or a 90° angle in any M-series modular faceplate, frame, or surface-mounted box avoiding the need for special faceplates.	This is OEM specific as M series is of one OEM make which is OEM specific word		The Category 6 outlets shall be capable of being installed at either a 45° or a 90° angle in any modular faceplate, frame, or surface-mounted box avoiding the need for special faceplates.
			C. Certifications: UL Listed	Request to add ETL verified /3P certified as UL is for fire rating not performance as in cable boyh certificates are requested	Certifications: UL Listed and ETL/3P verified .Certificate to be available on intertek or 3P website	Certifications: UL Listed and ETL/3P verified .Certificate to be available on intertek or 3P website
17	3	<b>Specification for CAT 6 LSZH U/UTP RJ45 Patch Cords</b>				
			The patch cord should be LSZH and should comply to the following standard: ISO/IEC 60332-3-22: Vertical Flame Spread	The Standard asked for Flammability is for Bunch cabling whereas these patch cords will be installed on Equipment's so this Standard should be changed to IEC 60332-3-1	The patch cord should be LSZH and should comply to the following standard: ISO/IEC 60332-3-1: Vertical Flame Spread	The patch cord should be LSZH and should comply to the following standard: ISO/IEC 60332-1 or 60332-3 Vertical or Horizontal Flame Spread
				Add ETL/3P verified certificate as this must for patch cord as patch cord need to be tested by third part as this is the weakest link in system		No change

	S.No		Specifications	Complied(Yes/No) / Remarks	Justification/Suggestion	INST Clarifications
18	4	<b>Specification for CAT 6 Jack Panel</b>				
			The panel must be capable of supporting an upgrade to an intelligent system without any interruption to service due to patch cord removal or terminal block re-termination.	Please remove this as intelligent patch panel upgradation will not make system intelligent you need complete software and set of other equipment to make it intelligent as moreover this solution is OEM specific		The panel must be capable of supporting an intelligent system with their software .
			The upgrade to an intelligent system shall be performed through the addition of an overlay panel that does not require tools for installation.	Please remove this as intelligent patch panel upgradation will not make system intelligent you need complete software and set of other equipment to make it intelligent as moreover this solution is OEM specific		The panel must be capable of supporting an intelligent system with their software
19			<b>Approved Brands – Systimax / Corning/ AMP / Molex</b>	<b>Schneider is leading brand in Structure cabling industry. Schneider aim to support customer to get the Green Building Infrastructure. Schneider Products are Green Premium Product which help customer to get the Green Building Certificate from Government and customer can eligible to get the incentive of 10% FAR. Schneider is already serving various prestigious institutes like IIT Gandhi Nagar, IIT Delhi, IIT Kanpur, IIT Ropar, IIT Mandi, JNU, Mandoli Jail, Rajiv Gandhi Cancer Hospital, Max Hospital etc on turnkey basis. Our request to incorporate the same in your New Building infrastructure.</b>	<b>Approved suggested Brands – Systimax / Corning/ AMP / Molex / Schneider</b>	<b>No change</b>
20		<b>Specification for CAT 6 LSZH U/UTP Cable</b>				
			Minimum 16000 Nodes all Having above 6dB NEXT Margin	it is Favoured to specific one OEM	so request you to Delete this Clause	<b>No change</b>
			Should have ETL Verified CMR, CMG	it is Favoured to specific one OEM	since the complete cabling is Horizontal Cabling here and Riser rated CMR cabling is not required as vertical cabling in not here. So request to consider for CM rated LSZH cable	<b>No change</b>
			ISO / IEC 60332-3-22 vertical Flame Test	it is Favoured to specific one OEM	For Horizontal cabling 60332-1 flame test is required since there is No vertical cabling so 60332-3 is not required.	<b>No change</b>
21		<b>Specification for CAT 6 LSZH U/UTP RJ45 Patch Cords</b>				
			ISO / IEC 60332-3-22 vertical Flame Test	it is Favoured to specific one OEM	For Horizontal cabling 60332-1 flame test is required since there is No vertical cabling so 60332-3 is not required.	<b>No change</b>

	S.No		Specifications	Complied(Yes/No) / Remarks	Justification/Suggestion	INST Clarifications
22			<b>Specification for CAT 6 Jack Panel</b>			
			The panel must be capable of supporting an upgrade to an intelligent system without any interruption to service due to patch cord removal or terminal block re-termination.	it is Favoured to specific one OEM	suggest to Go for Intelligent system for Day One or Normal traditional Panel System. Upgrade to an Intelligent is meant for specific OEM	<b>No change</b>
			The upgrade to an intelligent system shall be performed through the addition of an overlay panel that does not require tools for installation.	it is Favoured to specific one OEM	suggest to Go for Intelligent system for Day One or Normal traditional Panel System. Upgrade to an Intelligent is meant for specific OEM	<b>No change</b>
23	1	Terms Of Payment Tender Document- PART A , Page 23 of 100	Stage Payment for SITC items, shall be as mentioned below: a. 50 % payment within 15 days of supply of the system at site in good condition Along with test reports etc. b. 35% payment after installation (ready for testing and commissioning). c. 10% payment after testing, commissioning. d. 5% after Handing over to the department for beneficial use		This is a material intensive project with more than 85% of the cost of the project being material cost. We request you to accept payment terms as per CPWD i.e. 80% of item rate to be paid within 15 days against delivery on pro-rata basis, 10% of item rate to be paid pro-rata against installation (ready for testing and commissioning)., 5% of item rate to be paid pro-rata against testing and commissioning and 5% against handover over to the department for beneficial use.	No change
24	1	PART-A: TECHNICAL/ELIGIBILITY BID Page No. 23: Terms of Payment	Stage Payment for SITC items, shall be as mentioned below: a. 50 % Payment within 15 days of supply of the system at site in good condition along with test reports etc. b. 35% Payment after installation (ready for testing and commissioning) c. 10% Payment after testing, commissioning. d. 5% after Handing over to the department for beneficial use.		It is requested to please change the payment terms as: 90 % Payment on delivery and 10% against Installation because it is hardware project comprising of Delivery Installation and Support. Department has already taken due care of their security concern by asking PBG for project period	No Change
25	2	PART B Particular Specifications Approved makes & Tender Drawings Page No. 35 Data Networking System Point No. 12	Wireless access points (Aruba / Cisco/ Ruckus / Extreme networks)		We request you to relax it to other OEM's, whose core expertise and manufacturer of Wireless Wi-Fi to allow OEM to bid in Tender. Request to attached letter from Urban Ministry to liquidate such clauses vide letter No. D.O. No. K14012/101(17)/2017-SC-III-A dated 27th April, 2017.	No Change
26	1	Page No. 35 (Part-B) vide Point No. 12	Wireless access points (Aruba / Cisco/ Ruckus / Extreme networks)		We request you to relax it to other OEM's, whose core expertise and manufacturer of Wireless Wi-Fi to allow OEM to bid in Tender. Request to attached letter from Urban Ministry to liquidate such clauses vide letter No. D.O. No. K14012/101(17)/2017-SC-III-A dated 27th April, 2017.	No change