

Pak-Austria Fachhochschule: Institute of Applied Sciences & Technology, Haripur

Tender for “SUPPLY, INSTALLATION/ DEPLOYMENT & COMMISSIONING OF DATA CENTER, CAMPUS NETWORK (wired and wireless), IP SURVEILLANCE & VDIs”

Queries/ Suggestions/ Observations from Prospective Bidders on Subject Tender & PAF-IAST Response

Note: Text in “**RED**” color in last column are the only additional changes beyond the ones made in modified Tender document/ RFP.

COMPONENT #1: CAMPUS CORE NETWORK (Wired)					
Q. #	Ref. of RFP	Existing Specs	Query/ Suggestion/ Observation	Justification	PAF-IAST Response
1.	Component 1 - Campus Core Network (Wired): (Router: System Parameter)	No. & Capacity of SFP Ports: 14 x 10GE SFP+ (with backward compatibility) WAN/LAN ports	4 x 10GE SFP+ (with backward compatibility) WAN/LAN ports	<ul style="list-style-type: none"> •The specs are all the same with Huawei AR6300, and 14*10GE SFP+ is an unique feature in 10Gbps forwarding routers only. •Even Cisco products with 10Gbps performance only has 2*10GE SFP+ 	All major brands/ manufacturers offer interfaces with even more SFP+ ports. Therefore, the requirement remains intact, and cannot be changed to accommodate any specific brand/ manufacturer.
2.	Component 1 - Campus Core Network (Wired): (Firewall: System Parameter)	IPSec VPN Throughput: 12 Gbps or more	Revise IPSec VPN Throughput to: 3Gbps or more	<ul style="list-style-type: none"> •IPsec VPN Throughput is sized based on PAF-IAST Internet Bandwidth with external entities. •IPsec VPN will perform encryption, hashing, tunneling between PAF-IAST and external entities. •10G PERN between HEC & PAF-IAST is L3 Intranet Setup and it does not relate to IPSec VPN Throughput. 	Let the requirement be determined by PAF-IAST, since there will be close and secure connectivity requirements with its international partners in Austria and China. Secondly, all major brands/ manufacturers support the required IPSec VPN throughput. Therefore, the requirement remains intact, and bidders are advised to quote suitable product meeting or exceeding the requirements, which are available with all major brands/ manufacturers.
3.	Component 1 - Campus Core	No. & Capacity of SFP Ports: 6x 1GE SFP and 6x 10GE SFP+ (along	Revise Specs: Minimum 8 x 10GE	<ul style="list-style-type: none"> •Whole PAF-IAST network backbone is on 10G SFP+ design. 	Bidders may quote appropriate product which meets or exceeds the requirements.

	Network (Wired): (Firewall: System Parameter)	with 4 SFP+ multimode)	SFP+ (along with 4 SFP+ multimode)	<ul style="list-style-type: none"> • Increase to 8 x 10GE SFP+ Interfaces for 40G LAN & 40G WAN in future. • Remove 6 x 1GE SFP Interfaces as it is unnecessary for PAF-IAST 	
4.	Component 1 - Campus Core Network (Wired): (Firewall: System Parameter)	No. & Capacity of RJ45 Ports: 16 x 1GE RJ45	Revise Specs: Minimum 4 x 1GE RJ45	<ul style="list-style-type: none"> • Whole PAF-IAST network backbone is on 10G SFP+ design. • Reduce to minimum 4 x 1GE RJ45 Interfaces which is more than enough for Direct Management purpose 	Let the requirements be determined by PAF-IAST. These interfaces have been added to meet the requirements to connect on 1GE. For this reason, option to provide multiple 1GE interfaces to support downlink connection has been kept in consideration.
5.	Component 1 – Campus Core Network (Wired) Core Switch	Tech Specs: SUP Line Cards issue	6 Line cards besides Service/ Supervisor Engine slots	<ul style="list-style-type: none"> • With required 24*10G ports & 24 1G ports & 8 40G ports, all 3 slots would be occupied and no space for future 100G expansion. Suggest to revise as “6 Line cards besides Service/ Supervisor Engine slots” 	Though the number of Line Cards was determined based on the current requirement. However, as suggested, the number of Line Cards in Core Switch is revised to “6 Line Cards beside Service/ Supervisor Engine slots”.
6.	Component 1 – Campus Core Network (Wired) Core Switch	WLAN Controller: Integrated with support of 192 Aps or more	Nil	<ul style="list-style-type: none"> • There is no need to integrated wireless controller in core switch within a chassis it is only mentioned due to support one specific brand as all manufacturers do not offer this which clearly state the biasness. • Wireless controller part is completely missing from the RFP as only one specific brand Huawei offers this feature set in core switch which cannot handle such large install base of 192 AP's clearly states the biasness of the RFP in order to restrict the competition & only allow Huawei partners to participate & allow monopolization /controlled biding. May result heavy financial losses to PAK-IAST 	Let the need be decided by PAF-IAST. Secondly the statement “...to support one specific brand...” is incorrect since there are other brands/ manufacturers who offer integrated wireless controller. Also, the statement “Wireless Controller part is completely missing” is self-contradictory. However, bidders have been allowed to meet the requirement through a standalone Wireless Controller. Kindly refer to modified Tender document/ RFP.
7.	Component 1 – Campus Core Network (Wired)	Line Cards: 3 Line cards besides Service/ Supervisor Engine slots	Allow distributor/ virtual chassis design	<ul style="list-style-type: none"> • Chassis performance and interface density can also be achieved by fixed from switches through distributed/ 	All major brands/ manufacturers support modular chassis design, and this is a preferred design for Core switches.

	Core Switch			virtual chassis method. So kindly allow the other brands to quote their distributor/ virtual chassis design.	Therefore, the requirement remains intact, and cannot be changed to accommodate a specific brand/ manufacturer.
8.	Component 1 – Campus Core Network (Wired) Core Switch	MAC Address Table: Should support 32K MAC address entries	Core switch must support 96K or more MAC address entries	<ul style="list-style-type: none"> Enterprise Core switch for such a large networks are offered with at least 96K whereas your specs states 32K which is under specs & can be obtained through access/aggregation switch which is not design for a Enterprise core switch. This will also create bottle neck for the whole solutions in future. 	MAC address entries requirement has been increased to 96K. Kindly refer to modified Tender document/ RFP.
9.	Component 1 – Campus Core Network (Wired) Core Switch	Routing Table Entries	Missing in RFP. Must support 128K or more Routing entries.	<ul style="list-style-type: none"> Routing entries are one of the major part of a Core switch which is not mentioned. Must support 128K or more Routing entries as no core switch RFP is published without it. 	Routing is the layer-3 functionality of a Switch (a Layer-2 device), and so not given specific consideration here. However, as suggested, Core Switch must support 1024K or more Routing entries.
10.	Component 1 – Campus Core Network (Wired) Core Switch	VLAN: MUX VLAN	Should be replaced as (Private VLAN)	<ul style="list-style-type: none"> Private VLAN (MUX VLAN is a one brand name feature which they are using as privately VLAN so should be replaced as (Private VLAN) 	The term MUX VLAN has been qualified with the term “or equivalent”. Kindly refer to modified Tender document/ RFP.
11.	Component 1 – Campus Core Network (Wired) Core Switch	Routing: Static routes, RIPv1/ v2, OSPF, IS-IS, RIPng, OSPF, OSPFv3, ISIS, IS-ISv6, BGP4, BGP4+, VRRP, and VRRP6	It should be RIPv1/v2 or OSPF RIPng, BGP4, BGP4+, VRRP	<ul style="list-style-type: none"> Static routes, RIPv1/ v2, OSPF, RIPng, BGP4, BGP4+, VRRP is mentioned in the RFP whereas it should be RIPv1/v2 or OSPF RIPng, BGP4, BGP4+, VRRP should be mentioned which allow us to participate with our brand & allow healthy competition. 	All major brands/ manufacturers support the mentioned Routing protocols. Therefore, the requirement remains intact, and cannot be changed to accommodate a specific brand/ manufacturer.
12.	Component 1 – Campus Core Network (Wired) Core Switch	VPN: IPsec VPN, SSL VPN, L2TP VPN, and GRE	-	<ul style="list-style-type: none"> No core switch offers these features as it’s only available in firewalls. 	It was a typographic error and has been corrected now. Kindly refer to modified Tender document/ RFP.
13.	Component 1 – Campus Core Network (Wired) Core Switch	Protection: RRPP, Single RRPP ring, Smart Link and Smart Link multiinstance, providing millisecond-	It should be replaced as “RING Protection”	<ul style="list-style-type: none"> This feature set is specific same one brand specific & can be checked from datasheet of that manufacturer switch. It should be replaced as “RING 	The proprietary terms, if used anywhere in the Tender document/ RFP, shall be considered qualified with the term “or equivalent”, provided the functionality(ies) are fully met.

		level protection switchover		Protection” so which will enables all other brands to qualify. <ul style="list-style-type: none"> •RRPP and smart link, multi-instance and millisecond protection all protection techniques are Huawei named. Specification is biased for Huawei. 	
14.	Component 1 – Campus Core Network (Wired) Core Switch	Rate Limiting: On protocol packets sending to the CPU	It should be replaced to “CPU Protection”	<ul style="list-style-type: none"> •This again copied from Huawei datasheet & should be removed to make it generic for other brands it should be replaced to “CPU Protection” •Packet sending to the CPU protection technique is Huawei named. Specification is biased for Huawei. 	The proprietary terms, if used anywhere in the Tender document/ RFP, shall be considered qualified with the term “or equivalent”, provided the functionality(ies) are fully met.
15.	Component 1 – Campus Core Network (Wired) Application Switch	MAC Address Table: Should support 32K MAC address entries	It should be at least 96K	<ul style="list-style-type: none"> •Enterprise Core switch for such a large networks are offered with at least 96K whereas your specs states 32K which is under specs & can be obtained through access/aggregation switch which is not design for a Enterprise core switch. This will also create bottle neck for the whole solutions in future 	The Application Switch is not a Core switch and the requirement remains intact. Kindly refer to the Core Switch specifications required for core switch.
16.	Component 1 – Campus Core Network (Wired) Application Switch	VLAN: MUX VLAN	It should be replaced as (Private VLAN)	<ul style="list-style-type: none"> •Private VLAN (MUX VLAN is a one brand name feature which they are using as privately VLAN so should be replaced as (Private VLAN) 	The term MUX VLAN has been qualified with the term “or equivalent”. Kindly refer to modified Tender document/ RFP.
17.	Component 1 – Campus Core Network (Wired) Application Switch	Routing: Static routes, RIPv1/ v2, OSPF, IS-IS, RIPng, OSPF, OSPFv3, ISIS, IS-ISv6, BGP4, BGP4+, VRRP, and VRRP6	It should be RIPv1/v2 or OSPF RIPng, BGP4, BGP4+, VRRP	<ul style="list-style-type: none"> •Static routes, RIPv1/ v2, OSPF, RIPng, BGP4, BGP4+, VRRP is mentioned in the RFP whereas it should be RIPv1/v2 or OSPF RIPng, BGP4, BGP4+, VRRP should be mentioned which allow us to participate with our brand & allow healthy competition. 	All major brands/ manufacturers support the mentioned Routing protocols. Therefore, the requirement remains intact, and cannot be changed to accommodate a specific brand/ manufacturer.

18.	Component 1 – Campus Core Network (Wired) Application Switch	VPN: IPsec VPN, SSL VPN, L2TP VPN, and GRE	-	<ul style="list-style-type: none"> No core switch offers these features as it's only available in firewalls. 	It was a typographic error and has been corrected now. Kindly refer to modified Tender document/ RFP.
19.	Component 1 – Campus Core Network (Wired) Application Switch	Protection: RRPP, Single RRPP ring, Smart Link and Smart Link multiinstance, providing millisecond- level protection switchover	It should be replaced as "RING Protection"	<ul style="list-style-type: none"> This feature set is specific same one brand specific & can be checked from datasheet of that manufacturer switch. It should be replaced as "RING Protection" so which will enables all other brands to qualify. RRPP and smart link, multi-instance and millisecond protection all protection techniques are Huawei named. Specification is biased for Huawei. 	The proprietary terms, if used anywhere in the Tender document/ RFP, shall be considered qualified with the term "or equivalent", provided the functionality(ies) are fully met.
20.	Component 1 – Campus Core Network (Wired) Application Switch	Rate Limiting: On protocol packets sending to the CPU	It should be replaced to "CPU Protection"	<ul style="list-style-type: none"> This again copied from Huawei datasheet & should be removed to make it generic for other brands it should be replaced to "CPU Protection" 	The proprietary terms, if used anywhere in the Tender document/ RFP, shall be considered qualified with the term "or equivalent", provided the functionality(ies) are fully met.
21.	Component 1 – Campus Core Network (Wired) Aggregation Switch	24-port Layer 3: Forwarding rate issue	Please revise it at least 600Mpps	<ul style="list-style-type: none"> Forwarding performance is 400 Mpps or more; due to the given ports required, 400Mpps cannot support the wire-speed forwarding, please revise it at least 600Mpps. 	Bidders may quote appropriate product which meets or exceeds the requirements.
22.	Component 1 – Campus Core Network (Wired) Aggregation Switch	MAC Address Table: Should support 32K MAC address entries	It should be at least 96K	<ul style="list-style-type: none"> Enterprise Core switch for such a large networks are offered with at least 96K whereas your specs states 32K which is under specs & can be obtained through access/aggregation switch which is not design for a Enterprise core switch. This will also create bottle neck for the whole solutions in future 	The Aggregation Switch is not a Core switch and the requirement remains intact. Kindly refer to the Core Switch specifications required for core switch.

23.	Component 1 – Campus Core Network (Wired) Aggregation Switch	Routing Table Entries	Missing in RFP	<ul style="list-style-type: none"> Core switch must support 128K or more Routing entries 	The Aggregation Switch is not a Core switch. Kindly refer to the Core Switch specifications required for core switch.
24.	Component 1 – Campus Core Network (Wired) Aggregation Switch	VLAN: MUX VLAN		<ul style="list-style-type: none"> Private VLAN (MUX VLAN is a one brand name feature which they are using as privately VLAN so should be replaced as (Private VLAN) 	The term MUX VLAN has been qualified with the term “or equivalent”. Kindly refer to modified Tender document/ RFP.
25.	Component 1 – Campus Core Network (Wired) Aggregation Switch	Routing: Static routes, RIPv1/ v2, OSPF, IS-IS, RIPng, OSPF, OSPFv3, ISIS, IS-ISv6, BGP4, BGP4+, VRRP, and VRRP6		<ul style="list-style-type: none"> Static routes, RIPv1/ v2, OSPF, RIPng, BGP4, BGP4+, VRRP is mentioned in the RFP whereas it should be RIPv1/v2 or OSPF RIPng, BGP4, BGP4+, VRRP should be mentioned which allow us to participate with our brand & allow healthy competition. 	All major brands/ manufacturers support the mentioned Routing protocols. Therefore, the requirement remains intact, and cannot be changed to accommodate a specific brand/ manufacturer.
26.	Component 1 – Campus Core Network (Wired) Aggregation Switch	VPN: IPsec VPN, SSL VPN, L2TP VPN, and GRE		<ul style="list-style-type: none"> No core switch offers these features as it’s only available in firewalls. IPsec VPN, SSL VPN, L2TP VPN, and GRE is not supported by box switch. 	It was a typographic error and has been corrected now. Kindly refer to modified Tender document/ RFP.
27.	Component 1 – Campus Core Network (Wired) Aggregation Switch	Protection: RRPP, Single RRPP ring, Smart Link and Smart Link multiinstance, providing millisecond-level protection switchover		<ul style="list-style-type: none"> This feature set is specific same one brand specific & can be checked from datasheet of that manufacturer switch. It should be replaced as “RING Protection” so which will enables all other brands to qualify. RRPP and smart link, multi-instance and millisecond protection all protection techniques are Huawei named. Specification is biased for Huawei. 	The proprietary terms, if used anywhere in the Tender document/ RFP, shall be considered qualified with the term “or equivalent”, provided the functionality(ies) are fully met.
28.	Component 1 – Campus Core Network (Wired)	Power is missing in specification		<ul style="list-style-type: none"> Normally multi-Giga bit switch is access switch with 1G/2.5G interfaces for 	Power should be in accordance to the 802.11ax Access Points requirements with a condition that all POE/++ ports are

	Aggregation Switch			802.11ax Access Points with high POE option, which support up to 65 watt.	to be utilized to serve 802.11ax Access Points
29.	Component 1 – Campus Core Network (Wired) Aggregation Switch (Interfaces)	No. & Capacity of SFPs: 24 x 100M/ 1G/ 2.5G/ 5G/ 10G Base-T Ethernet ports (POE++), 2 x40GE QSFP+ or 2 x 100GE QSFP28 ports and support 8*10GE SFP+ card		<ul style="list-style-type: none"> •Most Multi Gigabit switches comes with 1G/2.5G interface speed and this is also required at Access Point •Don't required too many uplink ports of 10G / 40G and 100G. 	As the role suggests, this is an Aggregation Switch which will be aggregating traffic from multiple 802.11ax Access Points. Therefore, the uplink requirements are justified as per current needs and future enhancement in the network.
30.	Component 1 – Campus Core Network (Wired) Aggregation Switch (Basic Feature)	MAC Address Table: Should support 32/16K MAC address entries	Aggregation switch must support 96K or more MAC address entries	<ul style="list-style-type: none"> •32/16K MAC addresses are too small for core switch 	The Aggregation Switch is not a Core switch. Kindly refer to the Core Switch specifications required at the core. However, bidders may like to quote suitable product meeting or exceeding the requirements.
31.	Component 1 – Campus Core Network (Wired) Access Switch (24 & 48-Port) (Interfaces)	No. & Capacity of SFPs: 24 Ethernet 10/ 100/ 1000 ports (PoE+), 4 x 10GE SFP+ Ports installed with 4 x 10GE SM 10KM SFP+ module		<ul style="list-style-type: none"> •This switch will be used for wireless access points whereas 802.11 AX model requires 2.5G multi GBit port is required it again clearly favors Huawei brand so it should be replaced as multi Gigabit 24 port Switch to make it generic allowing all brands to participate. 	For the 802.11ax Access Points Connectivity, an Aggregation Switch 24-Port 10GE Layer 3 has been introduced in the design. Kindly refer to the modified Tender document/ RFP.
32.	Component 1 – Campus Core Network (Wired) Access Switch (24 & 48-Port)	POE Standard	Missing in RFP	<ul style="list-style-type: none"> •The access point mentioned in RFP or 802.11 AX which requires switch to support POE standard is mandatory feature for Access Switch which is missing please add this as without mentioning the same solution cannot work. 	For the 802.11ax Access Points Connectivity, an Aggregation Switch 24-Port 10GE Layer 3 with POE++ standard has been introduced in the design. Kindly refer to the modified Tender document/ RFP. Further, all Access Switches also mention POE+ standard as required.
33.	Component 1 – Campus Core Network (Wired) Access Switch (24 & 48-Port)	VLAN: MUX VLAN		<ul style="list-style-type: none"> •Private VLAN (MUX VLAN is a one brand name feature which they are using as privately VLAN so should be replaced as (Private VLAN) 	The term MUX VLAN has been qualified with the term “or equivalent”. Kindly refer to modified Tender document/ RFP.

34.	Component 1 – Campus Core Network (Wired) Access Switch (24 & 48-Port)	Routing: Static routes, RIPv1/ v2, OSPF, IS-IS, RIPng, OSPF, OSPFv3, ISIS, IS-ISv6, BGP4, BGP4+, VRRP, and VRRP6		<ul style="list-style-type: none"> •Static routes, RIPv1/ v2, OSPF, RIPng, BGP4, BGP4+, VRRP is mentioned in the RFP whereas it should be RIPv1/v2 or OSPF RIPng, BGP4, BGP4+, VRRP should be mentioned which allow us to participate with our brand & allow healthy competition. •No requirement for such an advanced routing protocols for access switches. •The POE access switch doesn't need IS-IS, IS-ISv6, BGP4, BGP4+,VRRP, and VRRP6 in a university campus network. Suggest to delete. 	It was a typographic error and has been corrected now. Kindly refer to modified Tender document/ RFP.
35.	Component 1 – Campus Core Network (Wired) Access Switch (24 & 48-Port)	VPN: IPsec VPN, SSL VPN, L2TP VPN, and GRE		<ul style="list-style-type: none"> •No core switch offers these features as it's only available in firewalls. •IPsec VPN, SSL VPN, L2TP VPN, and GRE is not supported by such access box switch except 1 certain OEM. Suggest to delete. 	It was a typographic error and has been corrected now. Kindly refer to modified Tender document/ RFP.
36.	Component 1 – Campus Core Network (Wired) Access Switch (24 & 48-Port)	Protection: RRPP, Single RRPP ring, Smart Link and Smart Link multiinstance, providing millisecond-level protection switchover		<ul style="list-style-type: none"> •This feature set is specific same one brand specific & can be checked from datasheet of that manufacturer switch. It should be replaced as "RING Protection" so which will enables all other brands to qualify. •RRPP and smart link, multi-instance and millisecond protection all protection techniques are Huawei named. Specification is biased for Huawei. 	The proprietary terms, if used anywhere in the Tender document/ RFP, shall be considered qualified with the term "or equivalent", provided the functionality(ies) are fully met.
37.	Component 1 – Campus Core Network (Wired) Industrial Rugged Switch	Uplinks Port issue	Switch capacity should be 24 Gbps	<ul style="list-style-type: none"> •How can a switch with only 2 x SFP (GE/FE), 8 x GE (PoE / PoE+) ports reach 100Gbps switch capacity? with these ports, all wire-speed switch capacity should be 24 Gbps. 	Switching capacity generally documents the internal bandwidth capacity between ports. To avoid queuing at any port to port traffic, and for full duplex ports, the bandwidth capacity is recommended as twice the port bandwidth capacity. Currently there are 2*10GE (SFP+) and 8*1GE ports which is 28Gbps and in full

					duplex is 56Gbps. Therefore, the recommended Switching capacity will come out as 112Gbps, whereas the RFP asks for 100Gbps. Please refer to modified Tender document/ RFP for network ports.
38.	Component 1 – Campus Core Network (Wired) Industrial Rugged Switch (System Parameters)	Industrial Grade Compliance: IP68	Suggest to change to IP30 or IP40	<ul style="list-style-type: none"> •The geographical location of the university requires at least IP 30 therefore IP68 will be a big sacrifice looks like another favor to specific brand. •IP55 is low standard as compare to IP67 and IP68 •How can a switch get IP68 level? Water proof level 8 means the equipment should be in working condition and laid under several meters depth water and still work for more than serval hours, with SFP ports and GE ports, how could it possible to pass this test? Suggest to delete and replace as the industrial working temperature: -40~70°C 	Industrial Grade Compliance has already been lowered to IP55, which cannot be further downgraded to to such low specifications of IP30 or IP 40. “0” represents no protection from liquid and the PAF-IAST geographical location strictly require protection from low pressure water jets from any direction because it will be deployed in outdoor environment and also required a protection from dust. Bidders can propose better but not lower than IP55.
39.	Component 1 – Campus Core Network (Wired) Industrial Rugged Switch (Basic Features)	VLAN: MUX VLAN		<ul style="list-style-type: none"> •Private VLAN (MUX VLAN is a one brand name feature which they are using as privately VLAN so should be replaced as (Private VLAN) 	The term MUX VLAN has been qualified with the term “or equivalent”. Kindly refer to modified Tender document/ RFP.
40.	Component 1 – Campus Core Network (Wired) Industrial Rugged Switch (Basic Features)	Power Supply: Redundant Power Supply		<ul style="list-style-type: none"> •Not Required must be added to support one specific brand/ model. 	The requirement has been modified to Single Power Supply. Kindly refer to the modified Tender document/ RFP.

41.	Component 1 – Campus Core Network (Wired) Industrial Rugged Switch (Protocols Support)	Routing: Static routes, RIPv1/ v2, OSPF, IS-IS, RIPng, OSPF, OSPFv3, ISIS, IS-ISv6, BGP4, BGP4+, VRRP, and VRRP6		<ul style="list-style-type: none"> •Static routes, RIPv1/ v2, OSPF, RIPng, BGP4, BGP4+, VRRP is mentioned in the RFP whereas it should be RIPv1/v2 or OSPF RIPng, BGP4, BGP4+, VRRP should be mentioned which allow us to participate with our brand & allow healthy competition. 	It appears as wrongly perceived, since the Tender document/ RFP only mention “Static routes, RIPv1/ v2, RIPing, OSPF, OSPFv3” as required.
42.	Component 1 – Campus Core Network (Wired) Industrial Rugged Switch (Protocols Support)	VPN: IPsec VPN, SSL VPN, L2TP VPN, and GRE		<ul style="list-style-type: none"> •No core switch offers these features as it’s only available in firewalls. •IPsec VPN, SSL VPN, L2TP VPN, and GRE is not supported by such access box switch except 1 certain OEM. Suggest to delete. 	It was a typographic error and has been corrected now. Kindly refer to modified Tender document/ RFP.
43.	Component 1 – Campus Core Network (Wired) Industrial Rugged Switch (Reliability)	Protection: RRPP, Single RRPP ring, Smart Link and Smart Link multiinstance, providing millisecond- level protection switchover		<ul style="list-style-type: none"> •This feature set is specific same one brand specific & can be checked from datasheet of that manufacturer switch. It should be replaced as “RING Protection” so which will enables all other brands to qualify. 	The proprietary terms, if used anywhere in the Tender document/ RFP, shall be considered qualified with the term “or equivalent”, provided the functionality(ies) are fully met.

SUB-COMPONENT: PASSIVE WORK (Fiber, LAN & DC Cabling) FOR CAMPUS NETWORK

Q. #	Ref. of RFP	Existing Specs	Query/ Suggestion/ Observation	Justification	PAF-IAST Response
44.	Sub- Component Passive Work (Fiber Cable)	48 Core: Baynet, Armond	Fiber cable must support OS2 G.652.D and G.657.A1 Fiber cable must also be complaint: EN 187105, IEC 60794-1 F5, IEC 60794-1 F9 and IEC 60794-1 F15	<ul style="list-style-type: none"> •Baynet is substandard brand & is big quality compromise for the whole solution, even as per FBR this does not come in A Category cable thus brands of only A category should be allowed for such a large installation. No standards are mentioned in order to get a quality product following should be mentioned. 	Fiber Cable standard has been changed to renowned brands while qualifying with the term “or equivalent”. However, Bidders will be required to provide/ supplement their claim of “equivalent” product or material under passive work with Third Party Report, without which, claim will not be accepted, and Bid is likely to be rejected.

				<ul style="list-style-type: none"> •Very low standard optical fiber with no proper specification and construction details. 	
45.	Sub-Component Passive Work (Fiber Cable)	24 Core: Baynet, Armond	Fiber should support OS2 G.652.D and G.657.A1 Fiber cable must complaint: EN 187105, IEC 60794-1 F5, IEC 60794-1 F9 and IEC 60794-1 F15	<ul style="list-style-type: none"> •Very low standard optical fiber with no proper specification and construction details. 	Fiber Cable standard has been changed to renowned brands while qualifying with the term “or equivalent”. However, Bidders will be required to provide/ supplement their claim of “equivalent” product or material under passive work with Third Party Report, without which, claim will not be accepted, and Bid is likely to be rejected.
46.	Sub-Component Passive Work (Fiber Cable)	12 Core: Baynet, Armond	Fiber should support OS2 G.652.D and G.657.A1 Fiber cable must complaint: EN 187105, IEC 60794-1 F5, IEC 60794-1 F9 and IEC 60794-1 F15	<ul style="list-style-type: none"> •Very low standard optical fiber with no proper specification and construction details. 	Fiber Cable standard has been changed to renowned brands while qualifying with the term “or equivalent”. However, Bidders will be required to provide/ supplement their claim of “equivalent” product or material under passive work with Third Party Report, without which, claim will not be accepted, and Bid is likely to be rejected.
47.	Sub-Component Passive Work (Miscellaneous)	Media Converter: Gigabit, Platinum	Not Required No need of Media converter when using SFP on Access Switches.	<ul style="list-style-type: none"> •Using media converter increasing the additional active hop, and it is never reliable in large campus network. 	Bidders are required to quote this item as well, which is requirement of PAF-IAST.
48.	Sub-Component Passive Work (UTP Cable)	Cat 6A: 3M/ Schneider F/UTP	Gauge of cable should be specify : 23 AWG Jacket of cable must be Low Smoke Zero halogen (LSZH)	<ul style="list-style-type: none"> •CAT 6A cable should support per pair through polyester laminated aluminum foil and overall through a polyester laminated aluminum foil. •Very low standards for CAT6A, which is use for high data applications and wireless connectivity. 	CAT 6A Cable standard has been changed to renowned brands while qualifying with the term “or equivalent”. However, Bidders will be required to provide/ supplement their claim of “equivalent” product or material under passive work with Third Party Report, without which, claim will not be accepted, and Bid is likely to be rejected.
49.	Sub-Component: Passive Work Civil Works	IP Surveillance related Network	16,000 is either feet or meters?	<ul style="list-style-type: none"> •Civil Works (Digging Soft / Hard) Right map area required to know 	The quantity identified as 16,000 in Form-G (Pg. 59 Serial No. 4) should be considered in “Feet”

	(Ref. Pg. 59 Serial No. 4)			the right calculations 16,000 is either feet or meters?	
50.	Sub-Component: Passive Work		Consider the quantities of Passive equipment tentative and final quantities will be calculated As Per Actual basis.		Kindly refer to Clause 40 of Section 2: Instruction to Bidders. Further, this appears amongst the terms and conditions of Contract.
51.	Sub-Component: Passive Work	Installation, Configuration & Commissioning	Store room for the labor tools and accessories, Preferably the residence of the technicians in case of day and night work		Storage space for tools and accessories may be provided, without any liability on PAF-IAST part. However, there cannot be any commitment at this stage for provision of residence for the technicians.
52.	Sub-Component: Passive Work		In case of UTP Conduits are already laid It is responsibility of the PAF to provide the clear conduits routes and maps for the points.		Bidders are required to submit their proposals with entirety of solution as required in the Tender document/ RFP. Further, this appears amongst the terms and conditions of Contract.
53.	Sub-Component: Passive Work	Civil Works	Incase Civil work involved that will be charged extra Road boring ???		Civil Works have already been enlisted as part of Sub-Component: Passive Work. Bidders are required to quote the Civil works in its entirety associated with the project. There shall be No Extra Charges payable by PAF-IAST, if not identified and quoted by the Bidders in their proposals.

COMPONENT #2: CAMPUS WiFi NETWORK (Wireless)

Q.#	Ref. of RFP	Existing Specs	Query/ Suggestion/ Observation	Justification	PAF-IAST Response
54.	Component 2 – Campus WiFi Network (Wireless) Access Point (Indoor)	WLAN Features: System data rate: 5Gbps or more	Suggest to revise as 3Gbps	<ul style="list-style-type: none"> According to standard 80M bandwidth, System data rate: 5Gbps is not reachable, suggest to revise as 3Gbps otherwise only 1 OEM could meet. 	Though the first justification is not very clear, however statement made “...otherwise only 1 OEM could meet” is incorrect, since all major brands/ manufacturers support System data rate of 5Gbps or more, even the names referred in query/ observation. This is

				<ul style="list-style-type: none"> • If Cisco/ Aruba/ Ruckus/ H3C could not meet the unreasonable specs you set for 802.11ax, then only 1 preferred principle could participate in. 	also validated as the suggestion made at Q # 62.
55.	Component 2 – Campus WiFi Network (Wireless) Access Point (Indoor)	WLAN Feature: MIMO: 4x4 MU-MIMO @ 5 GHz for 802.11ax 2x2 MU-MIMO @ 2.4 GHz for 802.11ax	In both radio bands it should be same 4x4 MU-MIMO @ 5 GHz for 802.11ax 4x4 MU-MIMO @ 2.4 GHz for 802.11ax	<ul style="list-style-type: none"> • Access Point provide 4x4 MIMO on 2.4G band also. 	This is the minimum requirement. Bidders may quote appropriate product meeting or exceeding the requirements. Moreover, based on requirements, two types of Indoor Aps have been asked. Second indoor AP requirement is 4x4 MU-MIMO for both bands.
56.	Component 2 – Campus WiFi Network (Wireless) Access Point (Indoor)	WLAN Feature: Spatial Stream: Missing in RFP	Access Point should support at least 4 spatial streams on each band	<ul style="list-style-type: none"> • Spatial stream is core feature which should be part of the RFP in order to get performance its really strange that this is not even mentioned in RFP which can affect the performance so it should be mentioned as “Access Point should support at least 4 spatial streams on each band” • Not mention spatial stream for indoor radio. 	For this AP, the requirement for 2.4GHz band is to supports 2 spatial streams, and the 5GHz band to supports 4 spatial streams. Bidders may quote appropriate product meeting or exceeding the requirements.
57.	Component 2 – Campus WiFi Network (Wireless) Access Point (Indoor)	Interfaces: Uplink: 1 x 1GE or more RJ45 port	Access Point must support 1x 2.5/5 G Multi Giga bit port		The uplink ports have been enhanced with requirement of 1x5GE or 1x10GE. Kindly refer to the modified Tender document/ RFP.
58.	Component 2 – Campus WiFi Network (Wireless) Access Point (Indoor)	Interfaces: Antenna: Built-in	No Specification for antenna and gain of antenna.		Bidders are required to quote appropriate product meeting or exceeding the requirements.

59.	Component 2 – Campus WiFi Network (Wireless) Access Point (Indoor)	Security Features: Encryption	Suggest to delete	<ul style="list-style-type: none"> •As a fit AP solution, how can it work in the IPSEC model? suggest to delete otherwise only 1 OEM could meet. 	Not clear, what does fit AP solution means. However, as far as IPSec Security Feature is concerned, all major brands offer such Access Points. Therefore, the requirement remains intact, and not changed.
60.	Component 2 – Campus WiFi Network (Wireless) Access Point (Indoor)	Security Features: Supported Authentication: 802.1x, AAA, RADIUS, HWTACACS		<ul style="list-style-type: none"> •802.1x , AAA and Radius is offered by all brands it must be copied from specific brand model. 	The Supported Authentications have been modified. Bidders may offer any of the mentioned authentication techniques. Kindly refer to the modified Tender document/ RFP.
61.	Component 2 – Campus WiFi Network (Wireless) Access Point (Indoor)	Security Features: Protections: ARP Security, DHCP Snooping, Wireless intrusion detection system and wireless intrusion prevention including rogue device detection and countermeasure, attack detection and dynamic blacklist, AP blacklist and whitelist	Protection feature must be changed to Wireless intrusion detection system and wireless intrusion prevention including rogue device detection		Since there was no justification given to change the Protection Feature. Therefore, the requirement remains intact, and not changed.
62.	Component 2 – Campus WiFi Network (Wireless) Access Point (Indoor) Multi- Gigabit	WLAN Features: System data rate	Suggest to revise as 5.9Gbps	<ul style="list-style-type: none"> •According to standard 80M bandwidth, System data rate: 6Gbps is not reachable, suggest to revise as 5.9Gbps otherwise only 1 OEM could meet. •If Cisco/ Aruba/ Ruckus/ H3C could not meet the unreasonable specs you set for 802.11ax, then only 1 preferred principle could participate in. 	Though there are more than one brands/ manufacturers' products available in the market offering 6 Gbps or more System data rate. However, as requested the System data rate is revised to 5.9 Gbps or more.

63.	Component 2 – Campus WiFi Network (Wireless) Access Point (Indoor) Multi- Gigabit	WLAN Features: MIMO: 4x4 MU-MIMO @5G and 4x4 MIMO @2.4G	Access Point should support at least 4 spatial streams on each band.	<ul style="list-style-type: none"> •Not mention spatial stream for indoor radio. 	For this AP, the requirement for 2.4GHz band is to support 4 spatial streams, and the 5GHz band to support 4 spatial streams. Bidders may quote appropriate product meeting or exceeding the requirements.
64.	Component 2 – Campus WiFi Network (Wireless) Access Point (Indoor) Multi- Gigabit	WLAN Features: Spatial Stream: Missing in RFP	Access Point should support at least 4 spatial streams on each band		For this AP, the requirement for 2.4GHz band is to support 4 spatial streams, and the 5GHz band to support 4 spatial streams. Bidders may quote appropriate product meeting or exceeding the requirements.
65.	Component 2 – Campus WiFi Network (Wireless) Access Point (Indoor) Multi- Gigabit	Interfaces: Uplink: 1 x 10GE or more RJ45 port (backward compatible with 1GE), 1 x SFP+ Optical Port	Access Point must support 1x 2.5/5 G Multi Giga bit port Multi giga bit Switches required for 802.11ax Models		For this AP, the requirement for System data rate is 6Gbps. Therefore, 1x2.5/5 G does not meet the requirement. Accordingly, 24-port 10GE Aggregation Switch has been introduced in the design.
66.	Component 2 – Campus WiFi Network (Wireless) Access Point (Indoor) Multi- Gigabit	Interfaces: Uplink: 1 x 10GE or more RJ45 port (backward compatible with 1GE), 1 x SFP+ Optical Port	Suggest to delete otherwise only 1 OEM could meet.	<ul style="list-style-type: none"> •1 x SFP+ Optical port, as a 6Gbps POE power AP, it is very strange to require 1G SFP ports separately. 	First, it is 1 x SFP+ port and not 1G SFP. However, there was a typographic error, i.e. the “comma” should be read as “/” or “Or”.
67.	Component 2 – Campus WiFi Network (Wireless) Access Point (Indoor) Multi- Gigabit	Antenna: Built-in		<ul style="list-style-type: none"> •No Specification for antenna and gain of antenna. 	Bidders are required to quote appropriate product meeting or exceeding the requirements.

	(Interfaces)				
68.	Component 2 – Campus WiFi Network (Wireless) Access Point (Indoor) Multi- Gigabit	Security Features: Encryption	Suggest to delete	<ul style="list-style-type: none"> As a fit AP solution, how can it work in the IPSEC model? suggest to delete otherwise only 1 OEM could meet. 	Not clear, what does fit AP solution means. However, as far as IPSec Security Feature is concerned, all major brands offer such Access Points. Therefore, the requirement remains intact, and not changed.
69.	Component 2 – Campus WiFi Network (Wireless) Access Point (Indoor) Multi- Gigabit (Security Features)	Supported Authentication: 802.1x, AAA, RADIUS, HWTACACS	802.1x, AAA and Radius		The Supported Authentications have been modified. Bidders may offer any of the mentioned authentication techniques. Kindly refer to the modified Tender document/ RFP.
70.	Component 2 – Campus WiFi Network (Wireless) Access Point (Indoor) Multi- Gigabit (Security Features)	Protections: ARP Security, DHCP Snooping, Wireless intrusion detection system and wireless intrusion prevention including rogue device detection and countermeasure, attack detection and dynamic blacklist, AP blacklist and whitelist	Protection feature must be changed to Wireless intrusion detection system and wireless intrusion prevention including rogue device detection		Since there was no justification given to change the Protection Feature. Therefore, the requirement remains intact, and not changed.
71.	Component 2 – Campus WiFi Network (Wireless) Access Point (Outdoor)	Access Point (Bandwidth Support)	Suggest to revise as 5Gbps	<ul style="list-style-type: none"> According to standard 80M bandwidth, System data rate: 10Gbps is not reachable, suggest to revise as 5Gbps otherwise only 1 OEM could meet. If Cisco/ Aruba/ Ruckus/ H3C could not meet the unreasonable specs you set for 802.11ax, then 	Outdoor environment is expected to have high user density and will required more bandwidth especially during events. For this reason and ensure non-compromised services during real scenario, 10Gbps requirements was set. However, as requested it is being lowered to 5 Gbps with the condition

				only 1 preferred principle could participate in.	that the connectivity issues should not be faced and required coverage area should be fully covered as per PAF-IAST requirement.
72.	Component 2 – Campus WiFi Network (Wireless) Access Point (Outdoor)	WLAN Features: MIMO: 8x8 MU-MIMO @ 5 GHz for 802.11ax 4x4 MU-MIMO @ 2.4 GHz for 802.11ax	4x4 MU-MIMO @ 5 GHz for 802.11ax 4x4 MU-MIMO @ 2.4 GHz for 802.11ax	• Access Point should support at least 4 spatial streams on each band.	For this outdoor AP, the requirement is for more MIMO for open areas and/ or large users base. Therefore, the requirement remains intact, and not changed.
73.	Component 2 – Campus WiFi Network (Wireless) Access Point (Outdoor)	WLAN Features: Spatial Stream: Missing in RFP	Access Point should support at least 4 spatial streams on each band	• Not mention spatial stream for indoor radio.	For this AP, the requirement for 2.4GHz band is to support 4 spatial streams, and the 5GHz band to support 4 spatial streams. Bidders may quote appropriate product meeting or exceeding the requirements.
74.	Component 2 – Campus WiFi Network (Wireless) Access Point (Outdoor) Multi-Gigabit	Interfaces: Uplink: 1 x 10GE or more RJ45 port (backward compatible with 1GE), 1 x SFP+ Optical Port	Access Point must support 1x 2.5/5 G Multi Giga bit port Multi giga bit Switches required for 802.11ax Models		For this AP, the requirement for System data rate is 6Gbps. Therefore, 1x2.5/5 G does not meet the requirement. Accordingly, 24-port 10GE Aggregation Switch has been introduced in the design.
75.	Component 2 – Campus WiFi Network (Wireless) Access Point (Outdoor)	Interfaces: Uplink: 1 x 10GE or more RJ45 port (backward compatible with 1GE), 1 x SFP+ Optical Port	Suggest to delete otherwise only 1 OEM could meet.	• 1 x SFP+ Optical port, as a 6Gbps POE power AP, it is very strange to require 1G SFP ports separately.	First, it is 1 x SFP+ port and not 1G SFP. However, there was a typographic error, i.e. the “comma” should be read as “/” or “Or”.
76.	Component 2 – Campus WiFi Network (Wireless) Access Point (Outdoor) Multi-Gigabit	Antenna: Built-in		• No Specification for antenna and gain of antenna.	Bidders are required to quote appropriate product meeting or exceeding the requirements.

77.	Component 2 – Campus WiFi Network (Wireless) Access Point (Outdoor)	Security Features: Supported Authentication: 802.1x, AAA, RADIUS, HWTACACS	802.1x, AAA and Radius		The Supported Authentications have been modified. Bidders may offer any of the mentioned authentication techniques. Kindly refer to the modified Tender document/ RFP.
78.	Component 2 – Campus WiFi Network (Wireless) Access Point (Outdoor)	Security Features: Protections: ARP Security, DHCP Snooping, Wireless intrusion detection system and wireless intrusion prevention including rogue device detection and countermeasure, attack detection and dynamic blacklist, AP blacklist and whitelist	Protection feature must be changed to Wireless intrusion detection system and wireless intrusion prevention including rogue device detection		Since there was no justification given to change the Protection Feature. Therefore, the requirement remains intact, and not changed.

COMPONENT #3: DATA CENTER					
Q. #	Ref. of RFP	Existing Specs	Query/ Suggestion/ Observation	Justification	PAF-IAST Response
79.	Component 3: Data Center Uninterrupted Power Backup System	UPS installation mode: Rack Mounted	Rack mounted or floor standing. Option mentioned.		Rack Mounted UPS is needed. Therefore, the requirement remains intact, and not changed.
80.	Component 3: Data Center Design Requirements	IT Power Density: 3KW per Rack	Don't fix it. mention the range. i.e 4.5 to 5.5 KW	•It's not realistic as per load.	IT Power Density has been revised to 4KW per Rack. Kindly refer to modified Tender document/ RFP
81.	Component 3: Data Center	Total Cooling Capacity: 10KW or more	It should be from 22 KW to 25 KW, comparative to IT load	•Its not realistic	Minimum requirement of Total Cooling Capacity with N+1 Cooling Redundancy has been asked. Bidders

	In-row Precision Air Cooling				may quote suitable product meeting or exceeding the requirements.
82.	Component 3: Data Center In-row Precision Air Cooling	Indoor unit installation mode: Rack-mounted	It should be optional.	<ul style="list-style-type: none"> • Rack mounted/ in-row cooling. Or mention precision cooling required. As rack mount will occupy unnecessary IT space 	The requirement of indoor unit for In-row cooling is rack-mounted, which is in addition to IT Racks. Therefore, the requirement remains intact, and not changed.
83.	Component 3: Data Center Uninterrupted Power Backup System	Electrical Performance: Circuit Breaker Protection Support Type: rPDU of 32A or higher current	Rack PDUs: No metering is asked	<ul style="list-style-type: none"> • rPDU should be metered for the rack level monitoring 	Minimum requirement of rPDUs has been asked. Bidders may quote appropriate product meeting or exceeding the requirements.
84.	Component 3: Data Center In-row Precision Air Cooling	Air Volume: 2500m3/h or more	Mention the range or do not specify to a value	<ul style="list-style-type: none"> • Mention the range or do not specify to a value as deferent principle has different range 	The specification is not fixed, instead the minimum requirement is referred. Bidders may quote appropriate product meeting or exceeding the requirements.

COMPONENT #4: CAMPUS SECURITY (IP SURVEILLANCE)

Q. #	Ref. of RFP	Existing Specs	Query/ Suggestion/ Observation	Justification	PAF-IAST Response
85.	Component 4 – Campus Security (IP Surveillance) (Ref. Pg. 41)	Installation, Configuration & Commissioning	Installations map along Pole Designs (Height & Dimensions) are needed	<ul style="list-style-type: none"> • For CCTV Installation's aspect regarding deployment plan (Including Civil Works) we have to know the CCTV nodes installations map along Pole Designs (Height & Dimensions) which cause delay in manufacturing and plan as per required campus security parameters. For right pricing and completion time lines. 	Bidders are required to present their proposed installation design as part of the Presentation, based on the various Cameras defined in the Tender document/ RFP. Bidder's proposal may vary with respect to the quantity of each type of camera. However, for the purpose of bid comparison, Bidder's should stick to the quantities defined in RFP. Similar applies to the Pole Designs and proposed quantities. The height of Pole should be 20 feet, whereas

					specification of the Poles are given in Sub-Component: Passive Work.
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COMPONENT #4: CAMPUS SECURITY (IP SURVEILLANCE)

Q. #	Ref. of RFP	Existing Specs	Query/ Suggestion/ Observation	Justification	PAF-IAST Response
86.	Component 4 – Campus Security (IP Surveillance): (Command & Control System/Solution)	Memory Capacity: 4096GB or more	64 GB is RAM is required and required 32 slots which can make this to 2048 GB. So 4096 cannot be matched. So need to be changed to 64GB or more	64GB is asked for minimum and total 32 slots required.	The modification in Memory capacity Parameters has been accommodated and should be read as “64GB or more”

COMPONENT #5: VIRTUAL DESKTOP INTERFACE (VDI)

Q. #	Ref. of RFP	Existing Specs	Query/ Suggestion/ Observation	Justification	PAF-IAST Response
87.	Component 5 – Virtual Desktop Infrastructure: (Thin-Client: Terminal Parameters)	Processor: Quad-core ARM Cortex processors 1.8 GHz or higher	Intel Quad-Core Processors Based, 1.4GHz or higher Intel Dual-Core Processors Based, 2.4GHz or higher	<ul style="list-style-type: none"> None of Dell Thin-Client, HP Thin-Client or Sangfor Thin-Client can comply to the existing specification. 	Though HP t740 comply the required specification. However, the modification in Terminal Parameters has been accommodated and should be read as “Quad-core ARM Cortex/ Intel processors 1.4 GHz or higher; OR Dual-core ARM Cortex/ Intel processor 2.4 GHz or higher”
88.	Component 5 – Virtual Desktop Infrastructure: (Thin-Client: Terminal Parameters)	Network Interface: 1000 Mbps Adaptive Electrical Interface	Minimum 100Mbps Adaptive Electrical Interface or more	<ul style="list-style-type: none"> Thin-Client Desktop Display with Full HD will not consume more than 10Mbps during actual usage. 	1000 Mbps network interface are available with all major VDI Solution brands. Therefore, the requirement remains intact, and not changed.
89.	Component 5 – Virtual Desktop Infrastructure: (Thin-Client: Interface)	Ports: 4 x USB2.0 or higher, DVI-I and VGA display ports, dual-screen extended display	4 x USB 2.0 or higher, DVI-I / VGA / HDMI display port	<ul style="list-style-type: none"> Some Thin-Client does not have the DVI-I display port, and come with VGA and/ or HDMI port(s). Recommended Thin-Client with single display port as it fulfills all normal education purposes. 	The required specification for Thin-Client Interface (Ports) may be read as “4 x USB 2.0 or higher, DVI-I/ VGA/ HDMI display port”

90.	Component 5 – Virtual Desktop Infrastructure: (Thin-Client: Interface)	Display Screen: Missing in RFP		<ul style="list-style-type: none"> We are assuming that you already have the LEDs, Keyboard Mouse, as in RFP you have not mentioned such requirement. If we have to quote the LEDs, KB & mouse as well, please share LED Size for Thin Clients 	Bidders are required to quote complete solution including Display Screens (LED) of 22 inch +/- 0.5inch, International English Keyboard and Optical Mouse of same Brand.
91.	Component 5 – Virtual Desktop Infrastructure: (VDI Management Requirements)	Compute Node Parameters: Latest Xeon 16 Cores Dual Processor	Latest Xeon Dual Processors with Minimum Total 720GHz	<ul style="list-style-type: none"> All proposal should follow the above calculation in order to avoid under sizing which will cause bad user experience. <p><u>Solution Total Processing Power Calculation:</u> N Nodes x 2 Sockets x N Cores x N GHz x 1.2 Hyper-Threading x 90% Usage</p>	The required specifications for VDI Management Requirements may be read as “Concurrent processing power required is 775GHz or more, with provided processor”.
92.	Component 5 – Virtual Desktop Infrastructure: (VDI Management Requirements)	Storage Requirements: Proposal with Physical SAN Storage	Proposal with Physical SAN Storage and Virtual SAN Storage	<ul style="list-style-type: none"> Virtual SAN is latest technology and it is known for lower CAPEX with all the same features as Physical SAN. Many similar top universities have been using Virtual SAN since long. 	The requirement is to have separate and independency between compute and storage for VDI solution, and optimization either of the two independently. Moreover, for future growth, if PAF-IASST wishes to increase the Storage or Compute, should be able to do so for better fit to any situation/ limiting factors. Therefore, the requirement remains intact, and not changed.

GENERAL QUERIES/ CONCERNS					
Q. #	Ref. of RFP	Existing Specs	Query/ Suggestion/ Observation	Justification	PAF-IASST Response
93.	Query relating to Support Services	Support Services	Do you need prices in-house manning services or not?		Bidders should refer to Section 5b: Special Terms and Condition which covers minimum requirements for Standard, Training, Warranty/ Guarantee, and Support Services. In addition, Bidders are expected to present their proposed structure of

					Warranty and Support Services as referred in Form-E: Section 5 Pg. 55
94.	Query relating to Optional		Optional/ Solutions Bid brands acceptable or Not? Please clarify.		Kindly refer to Section 3: Bid Data Sheet at S. No. 7 Alternative Bids are Not Allowed. However, Bidders may propose Options within the same Bid as per the provision given at S. No. 10 of Section 3: Bid Data Sheet.
95.	Query relating to delivery timelines	2 weeks	Given delivery timeline in modified Tender are not suitable. Please extend delivery timelines especially for Passive Components. Please extend the delivery timeline to 4-6 weeks instead of 1 week.	<ul style="list-style-type: none"> • Its not realistic. At least 10 – 12 weeks required. • In Passive equipment you have mentioned 1 week delivery time which is not practically possible as we have to import some of the component. Therefore you are requested to please extend the delivery time to 4-6 weeks. 	Delivery, Installation and Commissioning timelines have already been relaxed in the modified Tender document/ RFP. As far as Delivery time of 1 week for Passive Components is concerned, it refers to the Delivery of final design/ layout of Passive work to PAF-IAST. The actual Passive work should be completed within 11 weeks of installation time.
96.				<ul style="list-style-type: none"> • The timeline of the passive work will dependent on the Availability & Readiness of the Site. • The Readiness of the site is responsibility of the PAF-IAST that includes availability of the Electricity, Final maps of the Cable Routes, accessibility and permissions of concern building 	PAF-IAST will ensure the Availability & Readiness of the Site with respect to Electricity, accessibility and permissions of concern building. However, Final maps of the Cable Routes and designs pertaining to all components of the project shall be the responsibility of the Bidder.
97.	Section 2: Instruction to Bidders Clause 44.1 (b)	If the Contractor fails to complete work as per PAF-IAST requirement, the Rector, PAF-IAST reserves the right to reject it altogether or impose a penalty not exceeding 50% of the total amount of the Contract.	Kindly review this clause and revise the penalty to 10%.		This is a standard Clause for all procurements and cannot be changed.

98.	Section 4: Evaluation Criteria Qualification	Annual Tax Paid (Principal & Bidder Individually) in Pakistan	We shall be obliged if you will remove the clause No. 16 under the Eligibility for the Principal Only.	<ul style="list-style-type: none"> • We have some reservations on the one point in Principal availability in Local Market and it should have to be TAX payers. We just want to bring this thing in your kind knowledge only one Chinese company is available as principal in Pakistan which is currently doing business directly. In this regards, we will not be able to provide our best services to submit the tender. We shall be obliged if you will remove the clause No. 16 under the Eligibility for the Principal Only. The highlighted point shall bring more healthy competition otherwise same product shall be quoted by different local vendor's partner. 	Clause 16 of Section 4: Evaluation Criteria does not relate to Eligibility, and so do not restrict any Bidder and/ or Principal to participate in this Tender. However, Bidders having their Principals paying Taxes in Pakistan will get scores towards qualification. Therefore, the requirement remains intact, and not changed.
99.	Section 4: Evaluation Criteria Qualification	Registration & Certification: ISO 9001 Certified	Don't Limitize to specific limitation.	<ul style="list-style-type: none"> • Fixing ISO certification in Evolution criteria 	Though the statement is not well understood. However, the requirement of ISO9001 Compliance is not mandatory and so not limiting any Bidder. But those Bidders who possess valid ISO9001 Certification will get scores towards qualification.
100.	Query related to Scope of Work		Any variation in the scope of the work will cost the extra timelines and the charges.		Bidders are required to submit their proposals with entirety of solution as required in the Tender document/ RFP. Further, this appears amongst the terms and conditions of Contract.