

Pre-Bid Meeting Vendors Queries and PTA Response.

A	Data Center Queries		
S.#.	Description	Query	PTA Response
1	Clause 4.3.2: 02 UPS to cater for 48 KW each parallel scalable to 240KW or above configured to operate in 2(N) Mode with alternate paths having 30mins collective backup time.	As the maximum IT load of Datacenter can reach upto 96KW, which also cover up the Maximum future extension. But the requirement of parallel UPS to make 240KW IT requirement is twice than possible IT load with extension. It will increase the cost of passive part and make the operations complex too.	UPS will cover backup of all Electrical Infrastructure for current load of 48 KW of IT Equipment. A total 48KW + 48KW = 96 KW as per current requirement. However, in case of future load the requirement will increase and hence PTA expects vendors to plan the passive electrical infrastructure for 120KW. The 240 KW is only written to clarify the total parallel operation capability of the UPS only.120 each (120KW+120KW)
2	Clause 4.1: Precision Cooling System In-Row 30KW or above. Precision In Row Cooling Unit, Standard DX Air-Cooled, 400V/3ph/50Hz. The solution should cover all the aspects of precision cooling including humidification, de-humidification etc.	Feature of humidification / de-humidification is missing in the Scope of Work under the relevant domain. it should also be part of scope of work.	Since there is a difference of humidification and dehumidification technologies between principle manufacturers, every participating vendor should quote according to their design. PTA would require humidification/dehumidification as part of the solution.
3	Clause 4.1.3	As per a Tier III conform data center, real time monitoring of critical power should be available in the solution from UPS input to distribution panel. But in RFP specs for monitoring of UPS's output panel is not clear. What features you require for this purpose?	Complete Functionality of UPS monitoring should be included and presented in the final solution. As per Tier-III Data Center Compliances.
4	Clause 4.3.8	In Clause 4.3.8 it is mentioned battery shall be integrated with DCIM which is not enough for entire monitoring. Please clarify that what features you require for this purpose?	Complete Functionality of UPS monitoring should be included and presented in the final solution. As per Tier-III Data Center Compliances.
5	BoQ item No. 14.7 Workstations with dual LED for NOC/SOC and laptops	What are the detailed specs of WS & Laptops	<p>1. <u>Work Station</u> : Small form Factor :10th Generation Intel® Core™ i7-10700, 16 MB Cache, 8 Cores, 16 Threads, 2.9 GHz to 4.70 GHz, 65 W, Graphics card = NVIDIA® Quadro P400, Memory = 16 GB, 2 x 8 GB, DDR4, 2666 MHz, M.2 2280, Hdd = 1 TB, Gen 3 PCIe x4 NVMe, Class 40 SSD, Software = Data Leakage Protection (DLP) . Windows® 10 Enterprise (64-bit), 3 years ProSupport with Next Business Day on-site service. Ports = 1 RJ-45 port 10/100/1000 Mbps (rear) , 1 USB 3.2 Gen 2 Type-C port with PowerDelivery (front), 1 USB 3.2 Gen 2 Type-A port (front) 1 USB 2.0 port with PowerShare (front), 1 USB 2.0 port (front) 1 USB 3.2 Gen 2 Type-A port (rear), 3 USB 3.2 Gen 1 Type-A ports (rear) 2 USB 2.0 ports with Power On (rear), 1 USB 2.0 header for Comon Access Card (CAC), 1 Universal Audio Jack, 1 Audio Line Out (rear) 2 DisplayPort 1.4 ports (rear), 1 x 3rd video port—HDMI2.0b, wifi 6 802.11 ax factory installed. PS2 Keyboard/Mouse with dual 24" LED screen same brand. 2.</p> <p><u>Laptop</u>: 14" Laptop : 10th Generation Intel® Core™ i7-10510U, 8 MB Cache, 4 core, 1.8 GHz to 4.9 GHz, Memory = 16 GB, 1 x 16 GB, DDR4, 2400 MHz, Graphics = NVIDIA® GeForce® MX230, 2 GB, 14-inch, FHD, 1920x1080, 60 Hz, Anti-Glare, Non-Touch, NTSC 45%, 220 Nits, IPS Display , Hdd = M.2 2280, 512 GB, Gen 3 PCIe x4 NVMe, Class 40 SSD , Microsoft Office Professional 2019, 3 X Years Pro Support Plus with Next Business Day Onsite Service , Backlight keyboard with backpack pro bag. Ports, 1 Flip-Down RJ-45 port 10/100/1000 Mbps, 1 USB 2.0 port, 1 USB 3.2 Gen 1 Type-A port with PowerShare, 1 USB 3.2 Gen 1 Type-A port, 1 HDMI 1.4, 1 USB 3.2 Gen 1 Type-C port with DisplayPort 1.2 Alt mode, 1 Universal Audio Jack</p>
6	BoQ item No. 15.1 Video Wall HD/UHD display (3x3) with Controller	What are the detailed specs of video wall?	Width = from 11.5 upto 12 feet, Height = from 4.4 upto 5 feet (3X2) Video wall with 4 inputs or higher, further detailed specification sheet is attached as a Annex-D: Video Wall Specification, with the installation of combination of wall papers.
7	SoW's Clause No. 7 "Cabling Design" and it's sub-clauses:	a. Will network cabling be carried out upon patch cords or it will be a proper Structured Cabling System as per standards?	It will be a complete Structured Cabling Solution.
8		b. Which type of Fiber Cabling Solution to be used?	Inter Rack Connectivity Design should include distributed Data cabling from server racks, Horizontal distribution Area Racks in each row & Main distribution Area Racks (if required) wired with OS2 Single mode fiber System & OM4 Multimode fiber System. It should be modular pre-terminated solution for Fiber and is to be designed to allow easy patching from any switch to any device without any need to run additional cabling. It Should be a plug and play system with custom made (length as required) pre-terminated cables to connect Distribution Area Racks with EDR and EDR to MMR. The products used must be compliant with industry standards on fire rating, Low smoke, Zero-Halogen, Flame retardant and Non-corrosive material. It must be a pre-terminated optical cabling system, High density and Bend insensitive. The solution must be based on 3 modular components: trunks, modules and patch panels. Offered solution should be expendable and scalable to accommodate additional Distribution Area Racks in Future.

9		c. Which type of Copper Cables to be used for Copper cabling solution?	Inter Rack Connectivity Design which includes distributed Data cabling from server racks, Horizontal distribution Area Racks in each row & Main distribution Area Racks (if required) wired with Cat-6A Copper Shielded system. It should be modular pre-terminated solution for Copper. The Copper cable solution should be tested up to 550MHz and provides transmission performance meeting Cat-6A specifications EN 50288, IEC 61156-5 and "Cat-6 augmented" in compliance with TIA/EIA 568. It Should be a plug and play system with custom made (length as required) pre-terminated cables to connect Distribution Area Racks with EOR and EOR to MMR.
10	Lots (A, B & C),	Can we bid for single Lot? Please specify 1 complete LOT?	Yes, you can apply for any number of the tenders as per your area of expertise. i.e. Can apply for DC or SOC or DS Switch or for all tenders or for any number of combination.
11	pp3, 1.a. Submission Date July 2020,	We assume its typo error, please rectify	Typo mistake, please look at Tender Notice, last date for submission is 21 September 2020 for all tenders.
12	pp6, 4.a. Bid Security 4% of total amount.	We are requesting you to kindly review this and keep it to 2% as per general practice	Bid Security remains 4%. No change.
13	pp6, 4.d. Retention money equal to 10% of total contract will be kept for 3 years;	We are requesting you to kindly review this and keep it for 1 year.	Retention Money of 10% of total contract amount should be kept for 3 years. No change
14	pp7, 5.b. The rates quoted shall remain valid for 120 days	The rates quoted shall remain valid for 120 days	Rates should be valid for 120 days. No change.
15	pp13, Annex-A, S#7, Bidder must have at least three (03) data centre certified resources.	We are requesting you to kindly recommend two (02) resources instead of three (03).	Certified Resource remains (3). No Change
16	pp14, Annex-B, S#2, Contractor must have deployed at-least one (1) Data Center project of similar scope in last three (3) years of 06-08 Racks or above configuration. (documentary proof be provided i.e. Supply Orders and completion certificate etc.),	We are requesting you to kindly remove the time clause or increase the limit up to Five (05) year	The requirement of (3) years remains same.
17	pp14, Annex-B, #4, Certified Technical staff CDCS/CDCP/CTDC, TIA 942, etc. technical staff /bidder organization ,valid in the last three years i.e. the technical staff certificates should be passed in last three years.	We are requesting you to kindly remove the time clause or increase the limit up to six (06) year + keep the certified resources to 02 and give 05 marks per certification.	PTA Would accept valid certifications. Not later than three Years.
18	pp18, 1.10, The bidder must conduct a site survey before bid submission and do the load bearing analysis for the proposed site. It shall be bidder's responsibility to enhance the load bearing capacity if needed, before the commencement of other project tasks and deliverables. PTA's civil engineer of Admin Directorate will provide the building drawings and necessary assistance if required.	It is requested with PTA to provide the building drawings and necessary assistance for analysis the load bearing capacity of proposed DC site.	Please arrange a visit to PTA HQ, drawings are available and conduct analysis for load bearing capacity.
19	PRE-PROPOSAL BIDDER'S QUERIES The bidder requiring any clarification(s) regarding queries related to tender documents may notify to in writing. The Director ICT on the recommendations of Supervisory Committee will respond to any request for clarification which are received well before (minimum 03 working days or more) the deadline for the submission of bids. PTA responses to queries will be published at PTA's Official website (https://www.pta.gov.pk) for the information to all prospective bidders (if not already clarified in the tender if deemed necessary for the bidder). PTA reserves the right to request clarifications in support of the bids from any or all bidders to this tender document and their proposals. A pre-bid query session will be arranged in PTA well before the due date and notification of the pre-bid meeting will be published on PTA web-site.	Please clarify whether the queries will be received with in fist seven days the publication of the tender	S.No.15, page No.10 & 11 is a typo mistake the queries will only be received as per the point mentioned at page no.1, (Clarification of the Tender Document (The bidders can seek further information or clarification regarding the Tender Document, within 07 days (Seven calendar days after issuance of tender. The clarification and its replies will be shared with all prospective bidders on PTA Website and will also be communicated at pre-bid meeting on 8th September 2020, from 11:00 to 12:00 hours at PTA Auditorium basement. Please register for pre-bid meeting)
20	pp26, 6.4, Each IT Racks should have 2 x Vertically mounted smart metered PDUs with 32Amp single phase having 2 X 20 Power Outputs (C19, C13)	This statement is different from the statement mentioned in BOQ, pp35, # 5.3 (Metered PDU: 32A IEC309, 36/20 way C13 + 6 or C13+4, way C19). Kindly clarify which is correct ones?	Metered PDU: 32A IEC309, Minimum 20 way C13 + C19 ports , Rack mounted, with network management card, overload protection, alarm threshord support.local current monitoring display etc. APC. Vertiv, Huwaei or equivalent, a total of twenty servers per rack shall be covered with dual power supply.

21	pp27, 9.2.5, HD (High Definition) and have a minimum resolution of 2 megapixel	IP Cameras should be	As per BOQ, pp35, 8.1: Mentioned as IP camera - 5MP minimum. Kindly clarify which is correct ones?	(Typo Mistake) 5 MP HD IP Cameras.
22	pp27, 9.2.6, NVR for recording (03 Month)		As per BOQ, pp35, 8.1: Mentioned recording is 30 days.	(Typo Mistake) NVR for recording should be for 30 days @ 30 FPS
23	pp35, 8.1, Data Center Monitoring (Security & Surveillance) , IP Camera - 5MP minimum, POE, Wall / Ceiling Mounted, Water Proof, 8 IP Camera support (1U) with up to 2 SSD Hard Disk connection, Storage of 4TB, 30 Days Storage, Commissioning of IP camera Monitoring system.		Kindly clarify which is correct ones? As per BOQ: Description quantity is 8 but total quantity is mentioned 12. Please clarify which is the correct quantity?	Camera Quantity is 12.
24	Air Conditioner in UPS Power Room		Please confirm how many comfort AC should install in UPS/power room. As per Tier compliance there should be two AC units in UPS/power room and operating with sequencer controller.	Agreed, A total of 2 X 2 ton inverter AC shall be installed with sequencer
25	Please confirm how many tap-off boxes we have to install in basement for supplying Wapda (W) and Genset (G) power to new data centre.		As per our recommendation four (04) Tap-off boxes should be installed in basement for supplying 2 x W & 2 x G powers to newly constructing data centre	Agreed (4) tap boxes shall be installed in PTA basement and a separate tray shall also be installed for power cables.
26	Please confirm how many power cables we have to lay from basement to new data centre.		As per our recommendation there should be four (04) power cables for W1, W2, G1 and G2 from 4 x Tap-off boxes respectively to meet Tier-III requirement.	Agreed (4) power cables shall be installed from Tap-off boxes to DC Power rooms
27	Please confirm if PTA have to install overhead cable tray/ladder for copper piping and power/data cabling then in how many rooms False Ceiling should be installed?		As per our recommendation False Ceiling should install in Manager room, NOC/SOC room and Corridor only. In the rest of rooms(i.e., DC, Power and MMR and Staging rooms) should be painted with fire rated black colour paint.	Agreed. No raised floor. A Complete overhead cable management System (Ladders/Trays) should be proposed and presented. False Ceiling in DC, power Room, MMR and Staging can be replaced by Black Firerated paint and False celing with mentioned AC type shall be installed in remaining rooms with cooridor.
28	Kindly confirm is steel duct and related accessories of centralized cooling system have to remove from corridor?		As per our recommendation steel duct and all sort of derbies should be removed. New fire rated false ceiling and lighting fixtures should install in corridor.	Yes all of the mentioned items shall be removed (Complete Civil work shall be carried out by the selected bidder).
29	3.9.2.3 protected power & network connections.	Redundant and	How many racks required in staging room? What is the required power density of these racks?	IT Racks are not required in Stagging Room.
30	Clause 4.1.3 Bidder shall install their new Electrical distribution panel with Surge Protection Device. (SPD) for the Data Center load		Query: It is not cleared ups out panel should be precision of same OEM or local fabricated.	PTA Expects vendors to quote the priciple manufacturer's Power Distribution Modules with all nessery equipment. Supporting 120KW passive cabling on each path.
31	4.1.4 ATS and LT panel should be installed in existing PTA power room basement. Electrical panel should be installed in the UPS room of Data center to feed power for UPS, Cooling, lightning DB's etc. The panel should be indoor type with an IP rating of 42, fabricated out of 16 SWG sheet and powder coating. The circuit breaker will be four pole as per contractor's design. All meters should be digital display type. Ammeters & voltmeter selector switch should be complete with front plate. Indication lamp should be suitable for flush mounting complete with base, 230V incandescent lamps will have resettles of suitable color, crystal type. The following are the minimum requirement. Please design as per BOQ and in line with Rated-III/Tier 3 Data Center requirements and sizing as below.		With UPS having center tapped batteries, it is recommended by leading manufacturers to not break the neutral. Therefore it is recommended to use 3 pole breakers.	Minimum of 3 Pole Breakers should be used. 4 pole breakers are also allowed as per Manufacturer design.
32	5.15 The system shall be completely factory-tested prior to shipment. Testing shall include, but not be limited to: complete pressure and leak testing to ensure system integrity. Each system shall ship with a completed test report to verify completion of factory testing procedure. FAT will be ensured through one of PTA resource.		Due to Covid-19 there is a ban on international travelling. Therefore, On Site FAT or Virtual FAT is required by PTA?	PTA would require (2) persons to participate in FAT. We expect this to be onsite, however, due to covid -19 the situation did not improve then in that case partner can arrange the Virtual FAT before the shipment at priciple manufacturer factory site and physical FAT should be arranged at vendor site in Paksitan before delivering it to PTA.
33	10.2.3 The system should be highly scalable to support future growth of PTA requirements for up to 1000 monitoring nodes.		In BOQ it is mentioned 100 Monitoring nodes. Please let us know the requirement? Considering, the size of data center and anticipated future expansion, 100 nodes will be sufficient.	100 Nodes are enough for monitoring at DCIM.
34	BOQ Items, Sr#2.8 Rack mountable ATS for Single Power Network devices Qty: 04		Please specify the rating for rack ATS. 10A, 16A or 32A? Our recommendation is 16Ampere.	minimum 16 Ampere
35	BOQ Items, Distribution Modules Should support 48 KW phase-I Qty: 02	Sr#3.2 Power	Modular power distribution on standard DBs?	Modular Distribution is required. Please quote and present the relavent solution.
36	BOQ Items, Sr#5.1 Network Rack 42U 750/800 X 1200, C/W Perforated doors with lock and key ; RFID and Bio Metric, Split side panels ; EIA mounting rails ; levelling feet ; color black ; perforated front/back door end blanking panels for empty U space Qty: 02		Since all racks are operated by PTA, it is recommended to add biometric and RFID access control to main doors only. RFID and Biometric metric both required? All racks shall have Biometric & RFID? All racks front and back doors? Split Side panels are not needed also not mentioned in above detailed specs	RFID and Biometric Both are Required for the Main doors of the pod and RFID access required for all doors (front and back) of the racks. Side panels can be split or single as per vendor design.

37	BOQ Items, Sr#14.1 UPS for NOC/SOC and Manager room (5 KW) equivalent with necessary backup and cables Qty 02	UPS for NOC/SOC and Manager room (5 KW) equivalent with necessary backup and cables Qty 02	What is the backup required on this UPS?	15 Minutes Backup Time. 30 minutes collective backup.
38	BOQ Items, Sr#14.2 Pre-shipment testing and Inspection by PTA (FOC) Qty 02	Pre-shipment testing and Inspection by PTA (FOC) Qty 02	Is this required for 2 persons or for 1? As in RFP Clause#5.15 it is stated that FAT will be ensured through one of PTA resource.	2 X Persons from PTA
39	a. Bid security will be equal to 4% of the total bid amount and will be in the shape of pay order / demand draft in favor of Pakistan Telecommunication Authority, Headquarters, Sector F-5/1, Islamabad. Bid security shall only be attached with the financial proposal otherwise proposal will not be accepted.		is bid security revised to 2% in shape of Bank Guarantee?	No Bank Gurantees are accepted, Bid Security remains 4%
40	d. Retention money equal to 10% of total contract value will be submitted before signing of contract. Retention money will be kept against warranty and support period i.e. (3 years) and will only be released after successful completion of warranty period and on issuance of the Performance Certificate by ICT Directorate and Technical Supervisory Committee		can vendor submit 10% performance guarantee against retention Money	As Already clarified ,Gurantees, Bank Gurantees are not accepted, only Retention money.
41	LT Panenls and ATS in power room		As per Tier 3 Data Center requirements & norms, ATS and LT Pannel are being installed in Power Rooms of Data Centers. May we go for this type of design?	Yes Allowed as per Tier 3 Data center requirement.
42	2C x 25mm2 PVC/PVC cable on cable try for UPS out to AC PDPM		It should be 3 Core cable (assuming the 3rd one for earthing) Please clarify.	Please propose as per your design.
43	Power Distribution Modules Should support 48 KW phase-I Qty: 2		We are assuming that a modular power distribution module (instead of local UPS output DB) is required? Please clarify.	Modular distribution Module should be proposed and presented.
44	VESDA-High Sensitive aspiration system for UPS-Electrical & DC rooms only. Qty: 4		If we consider it for UPS/Power Room and Data Center areas only, then these areas quantity will be 3 instead of 4. Please clarify?	Quantity is updated as (3), 1 X for Server room and 2 X UPS rooms.
45	Main Input Cable 1 X 4C X 155mm2 armored XLPE Cable + E On Cable Tray		As per our survey we suggest that, there is no need of Armored/XLPE insulated Main Cable, because there is no underground route observed. Hence may we propose PVC/PVC Insulated cable as per total load?	Armored/XLE insulated Main cables should be used, PVC insulated cables are not allowed.
46	5.8 The VFD shall automatically modulate through a range between 20 and 100 Hz to accommodate varying load conditions. (Capacity modulation between 10-100%)		Capacity modulation in this clause should be according to Manufacturers design.	Agreed as long as vendor is able to propose and present the solution according to specifications.
47	SECP certificate is required for participation		Can a vendor partiipates with out SECP registration	A vendor cannot participate with out a valid SECP registration, it is mandatory for DC.
48	Question raised with in pre-bid neeting with out refering any clause of bidding documents.		How Many Ports Shall be covered by Structured Cabling Solution	<p>1. Server Racks. a) <u>Cat 6a 10 G Copper ports per Server Rack</u> = 40 ports backward compatable with 1G Copper. B) <u>SFP28 Ports per Server Rack</u> = 40 Ports backward compatable with 10 G Fiber. C) <u>SAN HBA Ports per Server Rack</u> = 20 Ports supporting 8/16/32 gbps speed. Total Ports of 100 should be covered per Server Rack. Grand Total: 6 X 100 = 600 ports should be covered.</p> <p>2. Network Racks (with-in Server Room). a) <u>Cat 6a 10 G Copper ports per Network Rack</u> = 120 ports backward compatable with 1G copper. B) <u>SFP28 Ports per Network Rack</u> = 120 ports backward compatable with 10 G Fiber C) <u>SAN HBA Ports per Network Rack</u> = 60 Ports. D) <u>Network Rack to Nework Rack Connectivity 40/100G</u> = 8 Ports per Rack. Total Ports of 308 ports per Network rack with-in Server room shall be covered. Grand Total: 2 X 308 = 612 ports</p> <p>3. Meet Me room Network Racks. a) <u>Cat6a 10 G Copper ports per MMR Rack</u> = 48 copper ports backward compatable with 1G copper b) <u>SFP28 Ports per Network Rack</u> = 48 ports backward compatable with 10 G fiber. c) <u>Network Rack to Network Rack Connectivity 40/100G</u> = 08 ports per rack Total ports of 104 should be covered per MMR Rack. Grand Total: 2 X 104 = 208 ports. Note: Vendors should design, propose, and present a redundant most cost efective solution based on the above mentioned requirments, PTA would expect path redundancy as well as future scalability in cabling solution.</p>
49	What type of Security door shall be installed at the Main entranc of DC			The main Security door shall be of polycarbonate type.

50	<p>Queries regarding NOC Software</p> <ol style="list-style-type: none"> Network Performance <ul style="list-style-type: none"> Total Number of Layer 2 Switches Total Number of Layer 3 Switches Number of Core Switches Number of Routers Number of Firewalls configured Total Number of Servers (Physical) Number of Storages (SAN/NAS/Backup Appliances) 	Please provide number of devices.	<p>Total Number of Layer 2 Switches = 15 Total Number of Layer 3 Switches = 4 Total Number of Core Switches = 2 Number of Routers = 2 Number of Firewall = 4 at Hq and 12 at Zonal Offices Total Number of Physical Servers = 40 Number of SAN = 2 Number of Backup Appliances NAS+DDOP appliances = 3</p>
51	<p>Server & Virtualization</p> <ul style="list-style-type: none"> Number of VM hosts Number of VM zones Configured OS Platform (Physical/VM) Number of Applications running/hosted No Sockets configured per VM No of applications are to be covered 	Please provide numbe of VMS and applications.	<p>Number of VMs per Host are 15. Number of VMS Zones = 2. OS = Ubuntu Linux, Red hat Linux, Cent OS, Windows Server 2008/12/16/19 (All Servers are Running in both Virtual and Physical Envornment. Furthermore, Ubuntu Linux is running in Kubernates/Docker envornment. Number of Applications = 15. Number of Sockets/VMs = 2. Number of Applications = 20.</p>
52	<p>Network Visualization</p> <ul style="list-style-type: none"> How many networks are configured (single or branches are also involved, if yes, then how many branches to be covered) 	Please provide branch office details	Zonal offices need to be covered. Thjere are 12 Zonal offices connected through IP Sec VPN with their own private IP Subnet.
53	<p>Identify bandwidth hogs How many network devices to be covered</p>	Please provide Numbe of VMS and applications.	This point is mentioned in RFP.
54	<p>Question raised with in pre-bid neeting with out refering any clause of bidding documents.</p>	<p>NOC dashboards and CCTV views etc</p> <ul style="list-style-type: none"> How many dashboards are required? how many numbers of users are going to use the solution at an any given time interval Is High Availability desired? 	<p>Number of NOC dashboards = 3. Can be extended at later time. Number of users = 3. Can be extended at later time. HA may be configured in Future.</p>
55	<p>Question raised with in pre-bid neeting with out refering any clause of bidding documents.</p>	PTA requied any type of thrlrd party certification?	PTA would require a design validation complaint to TIA-942-B, rated-III data center published standards.