Our Ref: CAK/TEND/005B/1/2022-2023   **5ᵀᴴ APRIL 2023**

AMENDMENT NO 2 OF TENDER REFERENCE NO. CAK/TEND/005B/2022-2023 FOR PROPOSED STRUCTURED CABLING WORKS AT CBK PENSION TOWERS,HARAMBEE AVENUE NAIROBI

1. RELATIONSHIP WITH THE PRINCIPAL BID DOCUMENT

Save where expressly amended by terms of this Addendum, the principal Bid document shall continue to be in full force and effect.

The provision of the Addendum shall be deemed to have been incorporated in and shall be read as part of the principal Bid Document.

A. CHANGES HAVE BEEN MADE ON THE VARIOUS SECTIONS AS LISTED BELOW

A. The Specifications given for SAN Storage disks, Access switch and Data Center Core switches are not correctly captured. Refer to **page 138, 137** of the tender document.

1. **ACCESS SWITCH -** Supply, installation, configuration, network cabinet management and training.

Device Type	Switch - =>48 ports - Layer 3 capabilities - managed - stackable
Enclosure Type	Desktop, rack-mountable 1U
Uplink Port	10gb uplink speed
Subtype	1 Gigabit Ethernet
Ports	>48 x 10GBase-T + 4 x combo 10 Gigabit SFP+
Performance	Forwarding performance (64-byte packet size): 763.09 Mpps | Switching capacity: 1040 Gbps
Capacity	VLANs supported: 4094 | IPv4 routes (static): 7168 | IPv6 routes (static): 1792 | ACL rules: 2000 | QoS hardware queues: 8
MAC Address Table Size	32000 entries
Jumbo Frame Support	9000 bytes

Max Units In A Stack	8
Routing Protocol	RIP-2, IGMPv2, IGMP, IGMPv3, policy-based routing (PBR), MLDv2, MLD, VRRPv2, VRRPv3, CIDR
Remote Management Protocol	SNMP 1, SNMP, RMON, Telnet, SNMP 3, SNMP 2c, HTTP, HTTPS, TFTP, SSH, SSH-2, CLI, SCP
Encryption Algorithm	SSL
Authentication Method	RADIUS, TACACS, TACACS+
Features	Flow control, DHCP support, IGMP snooping, Syslog support, DoS attack prevention, port mirroring, DiffServ support, Weighted Round Robin (WRR) queuing, Broadcast Storm Control, IPv6 support, High Availability, Multicast Storm Control, Unicast Storm Control, firmware upgradable, sFlow, Spanning Tree Protocol (STP) support, Rapid Spanning Tree Protocol (RSTP) support, Multiple Spanning Tree Protocol (MSTP) support, DHCP snooping, Access Control List (ACL) support, Quality of Service (QoS), DHCP server, Dynamic ARP Inspection (DAI), reset button, STP Root Guard, Uni-Directional Link Detection (UDLD), DHCP relay, Remote Switch Port Analyzer (RSPAN), DHCP client, Management Information Base (MIB), dual firmware images, 10MB packet buffer, Class of Service (CoS), Generic Attribute Registration Protocol (GARP), Generic VLAN Registration Protocol (GVRP), Duplicated Address Detection, DiffServ Code Point (DSCP) support, Time-controlled ACLs support, Storm Control, IP source guard, ARP inspection, Internet Control Message Protocol (ICMP), Cisco Discovery Protocol, IGMP querier, VLAN Double Tagging (Q-in-Q), VLAN mirroring, DNS client, Voice VLAN, Secure Core Technology (SCT), LLDP-MED, Head-of-line (HOL) blocking, IP/Mac/Port Binding (IPMB), Secure Sensitive Data (SSD), Private VLAN, ISATAP tunnel support, RA guard, Guest VLAN, STP BPDU Guard

Compliant Standards	IEEE 802.3, IEEE 802.3u, IEEE 802.3z, IEEE 802.1D, IEEE 802.1Q, IEEE 802.3ab, IEEE 802.1p, IEEE 802.3x, IEEE 802.3ad (LACP), IEEE 802.1w, IEEE 802.1x, IEEE 802.3ae, IEEE 802.1s, IEEE 802.1ab (LLDP), IEEE 802.3an, IEEE 802.3az
Processor	X ARM: 1.3 GHz
RAM	>=512 MB
Flash Memory	>=256 MB
Status Indicators	Port transmission speed, system, RPS (Redundant Power Supply), link/activity, fan
Expansion / Connectivity	
Interfaces	48 x 10GBase-T RJ-45 | 4 x 10GBase-X SFP+ | 1 x console RJ-45 | 1 x USB Type A | 1 x management (Gigabit LAN)
Power	
Power Device	Internal power supply
Voltage Required	AC 120/230 V (50/60 Hz)
Features	Field-Replaceable Units (FRU) and redundant power supply, fans, and modular uplinks
MTBF(Mean time between failures)	> 174,542 hours
Compliant Standards	Plug and Play, UL 60950, CSA 22.2, FCC CFR47 Part 15 A, USGv6
Warranty	*The period of guarantee, warranty and free maintenance (labor and parts included) for the equipment shall be at least 12 months*

2. **DATA CENTER SWITCH -** Supply, installation, configuration, network cabinet management and training

Total number of slots	4
Line-card slots	2
Supervisor engine slots	2
Dedicated supervisor engine slot numbers	2 and 3
Supervisor engine redundancy	Yes
Maximum PoE per slot	2880W

Maximum Bandwidth scalability per line-card slot	Up to 480 Gbps on all slots
Number of power supply bays	4
AC input power	Yes
Integrated PoE	Yes
Power supplies supported	3200W AC, 2100W AC, Redundant
Number of fan-tray bays	1
Location of 19-inch rack-mount	Front
Dimensions (H x W x D)	10.47 x 17.30 x 16.30 in. (26.53 x 43.94 x 41.40 cm)
Rack Units (RU)	6 RU
Chassis weight (with fan tray)	39.0 lb (17.2 kg)
Mounting	19-in rack compatible (19-in. rack and cable guide hardware included)
Regulatory compliance	CE Marking
Safety	● UL 60950-1 ● CAN/CSA-C222.2 No. 60950-1 ● EN 60950-1 ● IEC 60950-1 ● AS/NZS 60950.1 ● IEEE 802.3
EMC	● 47 CFR Part 15 ● CISPR22 Class A ● KN 32 Class A ● EN 300 386 V1.6.1 ● EN 55022 Class A ● EN 55032 Class A ● CISPR 32 Class A ● EN61000-3-2 ● EN61000-3-3 ● ICES-003 Class A ● TCVN 7189 Class A ● V-3 Class A ● CNS13438 Class A ● CISPR24 ● EN 300 386 ● EN55024

	● TCVN 7317
	● KN35
	● NEBS: Operating temperature: -5 to 55C
	● Relative Humidity: 10-93%
	● Operating Altitude: up to 1829 m (6000 ft) at 55C
	● ETSI 300-019 Requirements are covered under GR-63-CORE with some deviations.
Industry EMC, safety, and environmental standards	● SR-3580 NEBS level 3 (GR-63-CORE, to current issue, GR-1089-CORE, to current issue)
	● ETS 300 019-2-1, Class 1.2 Storage
	● ETS 300 019-2-2, Class 2.3 Transportation
	● ETS 300 019-2-3, Class 3.2 Stationary
	● EN50121-4
	● EN 300 386
ROHS compliance	ROHS5
Warranty	*The period of guarantee, warranty and free maintenance (labor and parts included) for the equipment shall be at least 12 months*

3. **IBM SAN STORAGE DISKS**
   - 3.84TB RI SSD 12Gb
   - Model -SAS FRU02PX542.
   - **Quantity- 12**

B. **The Patch panel should be 48ports or more and not 24 ports as indicated in the document. Page Number 138 & fibre panel indicated as 12 ports , kindly change to 24 ports**

C. **The server specifications captured are also not correct, some critical aspects of specification missing. Let them use below specifications as had been earlier shared; Refer to page 139 of the tender document.**

4. SERVER Specifications and related Software's

Item	Production
Processor	36 core (2 x 18 core Intel Xeon V4 processors) @ 2.6 GHz
Chipset	Intel C600 series or better
Hard Disk	20 TB capacity or more
RAM	256 GB (4X64GB) DDR4 -2400 DIMM memory or later
Memory protection	Advanced ECC Online spare Mirroring mode Demand and Patrol Scrubbing Failed DIMM Isolation Data Bus ECC Protection Memory Thermal Control Memory Mirroring
Storage Controller	Flexible Smart Array controller with support for SAS Expander Card
Upgradability and scalability	• Upgradable upto 4 processors • Up to 48 DIMM slots • 7 PCIe 3.0 I/0 slots
High availability standard server features	• At least 2 Redundant power supplies • N+1 fans (or greater depending on the load) • Online, replaceable, and redundant OA, utilities, clock, and service processor subsystems • Fault Tolerant Crossbar Fabric • Enhanced MCA recovery • I/O Advanced Error Recovery • Redundant network paths • Redundant Fibre Channel path
Network controllers	At least 2 dual-port 10Gigabit Ethernet controller
Minimum Operating systems supported	Red Hat Enterprise Linux (RHEL) 64 bit • SUSE Linux Enterprise Server (SLES) 64 bit • Microsoft Windows Server 2016 R2 Enterprise and Datacenter (including Microsoft SQL Server 2016) 64 bit • VMware vSphere

Other I/O	• 1 RS-232 serial port • 2 USB ports @ 3.0 • iLO Remote Management • 1 VGA port • Built-in DVD-ROM, accessible from all partitions
Other accessories	• Include with complete system 42U 600x1075mm Advanced Shock Rack • Factory integrated 2U Easy Install Rail Kit
Standard Warranty	3 year Onsite hardware& labor support - attach time table

Software Name	Bidder Response – Attach evidence for software	Quantity Required
VMware Enterprise Suite		**15 licenses**
Windows Server 2019 data Centre Edition 64 bit for two servers		**Licenses as per core for one(1)36core server and one(1)20 core server**
Creation of Virtual Servers on the Host servers		

D. Biometric reader specifications not well captured.

Let them use below specifications as had been earlier shared.

5. FACIAL RECOGNITION AUTHENTICATION BIOMETRIC READERS – Page 141

NUMBER OF PROPOSED DEVICES TO PROCURE **– DEPENDENT ON THE NUMBER OF EXITS.**

i. Forced mask wearing alert: If the recognizing face does not wear a mask, the device will prompt a voice reminder. At the same time, the authentication or attendance will be failed

ii. Max.3000 faces capacity, Max.3000 fingerprints capacity, and Max.3000 cards

iii. Face Recognition Terminal, 4.3-inch LCD touch screen,2 Mega pixel wide-angle lens, built-in Mifare card reading module

iv. Two-way audio with client software, indoor station, and master station

v. Supports TCP/IP

vi. Supports ISUP5.0, ISAPI

vii. Configuration via the web client/IVMS

viii. Face recognition. Distance: 0.5 m to 1.5 m

ix. Duration < 0.2 s/User

x. Accuracy rate ≥ 99%; IP65

Specifications

General
button Touch Screen
Power supply method 2 pin connecter
Working temperature -30 °C to 60 °C (-22 °F to 140 °F)
Working humidity 0 to 90% (No condensing)
Dimensions 172.5 mm × 83.2 mm × 22.7 mm (6.79″ × 3.27″ × 0.89″)
Protective level IP65
Display - Dimensions 4.3-inch
Type LCD - Operation method Capacitive touch screen
Video - Pixel 2 MP, Lens × 2
Audio - Tone quality Noise suppression and echo cancellation
Network - Wired network 10 M/100 M/1000 M self-adaptive
Interface
Network interface 1
Lock output 1
Exit button 1
Door contact input 1
Power interface 2-pin
Capacity:

Card capacity 3,000
Face capacity 3,000
Fingerprint capacity 3,000
Event capacity 150,000
Authentication:
Card type Mifare 1 card
Card reading frequency 13.56MHz
Face recognition duration ＜ 0.2 s
Face recognition accuracy rate ＞99%
Face recognition distance 0.3 to 1.5 m
Fingerprint recognition duration ＜1s
Function:
QR code recognition Support
Face anti-spoofing Support
Audio prompt Support
Time synchronization Support

E. **Video conferencing solution not as per our specifications shared.**
   Let them use below. Refer to page 143 of the tender document.

6. **VIDEO CONFERENCING SOLUTIONS – Page 143 (remove item 21, 22,23, 24, 25, 26 27, 28, 29 & 30)**

Consider POLY STUDIO X50 or equivalent, Conferencing Solution to serve David Ongolo and Executive board room

- Interactive 85 Inch Screen with inbuilt smartboard capability
- 32GB or more inbuilt storage with Android Operating System
- Bluetooth and Wireless capability

7. **65" SMART TV for the smaller conference rooms- ANDROID**

With Bluetooth and Wireless capability

F. **Firewall specifications missing some critical specifications.**
   Let them use the detailed specifications as shared, below is the same;

8. Firewall – Supply, installation, configuration and training.

Performance	
Enterprise Test Conditions	Threat Prevention: 9.5 Gbps
	NGFW: 22 Gbps
	IPS: 25 Gbps
	Firewall: 39 Gbps
RFC 3511, 2544, 2647, 1242 PERFORMANCE (LAB)	Firewall 1518B UDP: 76.8 Gbps
	VPN AES-128: 11.9 Gbps
	Connections/sec: 330,000
	Concurrent connections: 4/8/16M

Additional Features	
Highlights	1x CPUs, 16x physical cores, 32 virtual cores
	2x 480 GB SSD storage
	2 AC power supply
	16, 32 and 64 GB memory options
	Lights-Out-Management
	Virtual Systems 20
Network Expansion Slot Options (2 of 2 slots open)	8x 10/100/1000Base-T RJ45 port card, up to 26 ports
	4x 1000Base-F SFP port card, up to 8 ports
	4x 10GBase-F SFP+ port card, up to 8 ports
	2x 40GBase-F QSFP+ port card, up to 4 ports

Content Security	
First Time Prevention Capabilities	CPU-level, OS-level and static file analysis
	File disarm and reconstruction via Threat Extraction
	Average emulation time for unknown files that require full sandbox evaluation is under 100 seconds
	Maximal file size for Emulation is 100 MB
	Emulation OS Support: Windows XP, 7, 8.1, 10
Applications	Use 8,000+ pre-defined or customize your own applications
	Accept, prevent, schedule, and apply traffic-shaping
Data Loss Prevention	Classify 700+ pre-defined data types
	End user and data owner incident handling
Dynamic User-based Policy	Integrates with Microsoft AD, LDAP, RADIUS, Cisco pxGrid, Terminal Servers and with 3rd parties via a Web API
	Enforce consistent policy for local and remote users on Windows, macOS, Linux, Android and Apple iOS platforms

Network	
Network Connectivity	Total physical and virtual (VLAN) interfaces per appliance: 1024/4096 (single gateway/with virtual systems)
	802.3ad passive and active link aggregation
	Layer 2 (transparent) and Layer 3 (routing) mode

	Active/Active L2, Active/Passive L2 and L3
High Availability	Session failover for routing change, device and link failure
	ClusterXL or VRRP
IPv6	NAT66, NAT64, NAT46
	CoreXL, SecureXL, HA with VRRPv3
	OSPFv2 and v3, BGP, RIP
Unicast and Multicast Routing (see SK98226)	Static routes, Multicast routes
	Policy-based routing
	PIM-SM, PIM-SSM, PIM-DM, IGMP v2, and v3
Physical	
	Single Power Supply rating: 300W
Power Requirements	AC power input: 100 to 240V (50-60Hz)
	Power consumption max: 183.2W
	Maximum thermal output: 625.1 BTU/hr.
	Enclosure: 1RU
Dimensions	Dimensions (WxDxH): 17.2 x 20 x 1.73 in.(438 x 508 x 44mm)
	Weight (Base/Plus): 17.6/19.8 lbs. (8.45/9 kg)
Environmental Conditions	Operating: 0° to 40°C, humidity 95%
	Storage: −20° to 70°C, humidity 95%
	Safety: UL, CB, CE, TUV GS
Certifications	Emissions: FCC, CE, VCCI, RCM/C-Tick
	Environmental: RoHS, WEEE, REACH1, ISO14001
Warranty and Support	1year + support and warranty guarantee

G. **The UPS specifications captured on the document are not detailed as per the Specifications document shared. Refer to page 138 of the tender document.**

9. **40 KVA UNINTERRUPTED POWER SUPPLY 1 UNIT**

Supply, Delivery, Installation and Testing of a 40 KVA UPS.

No.	Description	Technical Specifications
1.	Output Power	40 KVA
2.	Output Voltage	240/415V, 3-Phase
3.	Input voltage	240/415V, 3Phase
4.	Output Power factor	0.8
5.	Frequency	50HZ
6.	Waveform type (AC and Battery mode)	Sine wave

7.	Overload operation	60s@125%, 30s@150%
8.	Topology	Double conversion online
9.	Output frequency synchronization	Synchronized tomains
10.	Output connections	Hardwire 3 phase, 5 wire
11.	Input connection	Hardwire 3 Phase, 5 wire
12.	Efficiency	95%
13.	Power device Features	Built-in maintenance bypass, emergency power off, built-in static bypass, audible alarms
14.	Control panel	LED status display with load and battery bar-graphs and On Line On Battery Replace Battery Overload and Bypass Indicators
15.	Load balancing	The supplier must install and carry out load balancing of the UPS units with the already existing and functioning UPS located in the Server Room
16.	Form Factor	External
17.	Batteries	Rechargeable Typical recharge time – 3-4hrs Full load runtime - Approx. 5 minutes DC system voltage - +/- 240 V
18.	Interfaces/Ports	RJ-45 10/100 Base-T, RJ-45 Serial, Smart-Slot, USB port

No.	Description	Technical Specifications
19.	Load type	Full Load
20.	Output voltage Distortion	Less than 5% at full load
21.	Manufacturer's authorization letter	Provide a manufacturer's authorization letter
22.	Electrical connections accessories	To be determined during site survey
23	Conformance	Regulatory approvals – IEC 61000-3-2/3-3, ISO 14001/9001,IEC 320C19or equivalent
24	Warranty	1 (one) year Warranty workmanship and defects liability period for the entire UPS installation.

General Comments,

For any equipment to be purchased, it MUST include support and warranty not less than ONE YEAR.

Tender

2.1.03 – Existing 2- 40 KVA UPS and associated Accessories pg 90 of 247 Tender 55b
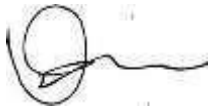
Mandatory Documents

Include items 6 to 15 of the mandatory requirements as below. Refer to page 37 of 247

No.	Parameters / Requirements	Submitted / Not Submitted (Yes or No)
1	Copy of certificate of Registration/Incorporation	
2	Copy of Valid Tax Compliance certificate	

3	Copy of Valid Business Permit/Trade License	
4	Audited Financial Statements 2019, 2020, 2021 & 2022.	
5	Duly filled, Signed and stamped Form of tender in the format provided	
6	Bidding Firm must be certified in both a) Advanced routing and switching or advanced borderless network architecture (provide evidence) and b) Advanced data center technology skills (Provide evidence)	
7	Must Provide Manufacturer authorization specific for this project for each ICT Equipment they bid to supply	
8	The Firm MUST have minimum Silver or premier partnership certification from the Manufacturer (Provide evidence which must be certified by the Manufacturer)	
10	Provide evidence of four (4) similar projects both size and technology for Tier 2 Data center deployment and four (4) reference letters & LSOs for each ICT equipment they bid to supply.	
11	Professional certification and CV showing above five (5) years' experience of personnel deploying/ upgrading data centers as well as the relevant accreditation certificates from the bodies governing the same in Kenya	
12	Professional certifications and CV showing above five (5) years' experience of personnel deploying the ICT equipment that they bid to supply Microsoft, Cisco, IBM Storage, Virtualization, UPS installation & configuration, among others	
13	ICT Equipment must meets specifications provided for this tender	

14	For cases of joint ventures/ subcontracting let this be clearly stated on the tender documents and these agreements shared as part of the bidding document.	
15	Equipment warranty and post deployment support should be not less than 12 months for parts and labor.	
16	The Bid documents must be bound & serialized.	
17	Bidders must submit an original and a copy of the bid document	

Yours Faithfully

W.Masinde

For.Ag.Director General
COMPETITION AUTHORITY OF KENYA