

**SPECIFICATION AND PRICE SCHEDULE**

TENDER NO. KAS/ICT/05/2018/2019

TENDER FOR SUPPLY, INSTALLATION AND COMMISSIONING OF VARIOUS ICT EQUIPMENT & NETWORKING OF KASNEB OFFSITE OFFICE

TENDERER'S NAME: ----- TEL.NO. ----- SIGNATURE-----

EMAIL ADDRESS:..... TENDERER'S STAMP:.....

No.	Item Description	Qty	Unit	Total Quoted Price Inclusive of 16% VAT Sh.	Delivery Period	Make/Model	Country of Origin	Remarks
1.	Networking	Router	1	No.				
	24 port PoE switch	1	No.					
	Trunking	Lot	Lot					
	9U Network cabinet	1	No.					
	Network accessories	Lot	Lot					
	Labour cost (Networking)	Lot	Lot					
	24 port Patch panel	1	No.					
	Wall plates	13	No.					
	3 metres patch cords	20	No.					
	CAT 6A ethernet cables	100	Metres					
	Smart UPS 750VA 1U	2	No.					
2.	Servers	2	No.					
3.	Keyboard VGA Mouse (KVM) switch	1	No.					
4.	27U Rack cabinet	1	No.					
5.	3000VA smart UPS	2	No.					
6.	Security	Biometric Access system	Lot	Lot				
		IP CCTV camera system	Lot	Lot				
		Eight (8) channel NVR recorder for megapixel IP cameras	Lot	Lot				
7.	Virtualization software	Lot	Lot					
8.	Visual studio enterprise edition 2017 DE	Lot	Lot					
Total Tender Sum in Sh.								
Total Tender Sum in Words								

NOTE:

- As per the Minimum Technical Specifications outlined on page 3 to 11 of this document. *(The template on page 11 of 11 MUST be filled, signed and stamped).*
- Attach brochures and specifications of the Equipment you are quoting for.
- The prices **MUST** be quoted in **Kenya Shillings (KSH)**.
- While quoting please remember that the prices quoted shall be expected (**MUST**) to remain valid for six (6) months (180 days) from the closing date of this quotation and validity may be extended upon satisfactory performance and mutual consent of the parties.
- **MUST have Manufacturer's Authorization.**

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| <ul style="list-style-type: none">• Your Prices should include Supply, Installation and Commissioning of Various ICT Equipment & Networking OF KASNEB Offsite Office.• Quantities to be ordered may VARY UPWARDS or DOWNWARDS during the Tender Validity Period.• TENDERS received in another form other than the above KASNEB STANDARD FORM shall not be considered.• For Companies owned by youth, women and persons with disabilities (Special group). Attach Copy of valid Certification from the National Treasury. |
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SPECIFICATIONS FORM

NO.	ITEM	SPECIFICATION(S)	Tenders Response and confirmation of the ability to meet KASNEB minimum Technical specifications (Indicate Yes or no where appropriate)		Remarks
			Yes	No	
1.	24 Port PoE Switch	Standard: CAT6a, 500MHz Connectors Front: 24 x RJ45 Socket Connectors Patch-PCB: 24 x LSA Clamp Form factor: 19 Inch, 1U Socket Labels: Write-on silk screen on panel front Speed: Up to 10-Gigabit Adapters output: 24 core Application: applicable for straight-through connection and diverged connection in aerial layout			
2.	Trunking	Metallic and PVC perimeter trunking			
3.	Router	Security: Firewall with advance application and control for email, Instant Messaging (IM), and HTTP traffic VPN Support: Site-to-site remote-access and dynamic VPN services: IP Security (IPsec) VPNs (Triple Data Encryption Standard [3DES] or Advanced Encryption Standard [AES]), Dynamic Multipoint VPN (DMVPN), Group Encrypted Transport VPN with onboard acceleration, and Secure Sockets Layer (SSL) VPN Intrusion prevention system (IPS): An inline, deep-packet inspection feature that effectively mitigates a wide range of network attacks Content filtering: A subscription-based integrated security solution that offers category-based reputation rating; keyword blocking; and protection against adware, malware, spyware, and Uniform Resource Locator (URL) blocking Ports: Four-port 10/100 Fast Ethernet managed switch with VLAN support; two ports support Power over Ethernet (PoE) for powering IP phones or external access points WiFi: Secure 802.11g/n access-point option based on draft 802.11n standard with support for autonomous Redundant WAN links: Redundant WAN links providing business continuity and WAN diversity. Warranty: 2 Years			
4.	9U Network Cabinet	Adjustable mounting rails: Adjustable in 1 inch increments side panels: Removable/lockable mounting rails: Cage nut style Front door: Glass with built in lock Rear door: With hanging points			

		<p>External width: 24 inches External height: 20.5 inches side panels: steel latches Fan assembly kit: yes rear panel: With hanging points Cage nuts: M6 screws and cage nuts</p>			
5.	CAT6A Ethernet Cables	<p>Electric Requirements: Characteristic Impedance(Zo): 85~115Ω (1~250 MHz) DC. Resistance Capacitance unbalance: 5% Pair-to-Ground CapacitanceUnbalance: 330 F/100mMax Conductor Resistance: 14.00Ω/100m 20o Max. Mutual Capacitance: 5.6nF/m Max,Spark Test: 2.5kV Nominal Velocity of Propagation (NVP): 69 Jacket(Grey): 75°C LSZH CompoundNominal Wall Thickness: 0.585mm Min Thickness: 0.458mm Overall Diameter: 5.8mm ± 0.3mm Pair 1: Blue & White/Blue Pair 2: Orange & White/Orange Pair 3: Green & White/Green Pair 4: Brown & White/Brown Insulation: HDPE (CMI-75E) Nominal Wall Thickness: 0.178mm Thickness: 0.153mm Conductor: Stranded Bare Copper(7 x 32 AWG)</p>			
6.	SMART-UPS 750VA 1U	<p>Output Power Capacity: 480Watts / 750VA Nominal Output Voltage: 230V Efficiency at Full Load: 85.0% Topology: Line Interactive Output Connections: (4) IEC 320 C13 (Battery Backup) Nominal Input Voltage: (4) IEC 320 C13 (Battery Backup) Input Frequency: 50/60 Hz +/- 3 Hz (auto sensing) Battery Type: Maintenance-free sealed Lead-Acid battery with suspended electrolyte : leakproof Typical recharge time: 2hour(s) Interface Port(s): DB-9 RS-232 , SmartSlot , USB Control panel: LED status display with load and battery bar-graphs and On Line : On Battery : Replace Battery : and Overload Indicators Audible Alarm: Alarm when on battery : distinctive low battery alarm : configurable delays Surge energy rating: 480Joules Standard Warranty: 2 years repair or replace Compliance: RoHS Waveform type: Sine wave Rack Height: 1U Included: CD with software , Documentation CD , Installation guide , Rack Mounting brackets , USB cable</p>			
7.	24 port Patch Panels	<p>Standard: CAT6a, 500MHz Connectors Front: 24 x RJ45 Socket</p>			

		Connectors Patch-PCB: 24 x LSA Clamp Form factor: 19 Inch, 1U Socket Labels: Write-on silk screen on panel front Speed: Up to 10-Gigabit Adapters output: 24 core Application: applicable for straight-through connection and diverged connection in aerial layout			
8.	Wall Plates	Double RJ45 CAT6A female data wall plates			
9.	3 Metres Patch cords	CAT6A cables			
10.	Server	Processor: Intel® Xeon® E5-2690 v3 (12 core, 2.6 GHz, 30MB, 135W) Number of processors: 2 Processor core available: 12 Form factor (fully configured): 2U Power supply type: (2) 800W Flex Slot Platinum hot plug power supply kit Expansion slots: (6) PCIe Memory, standard: 32GB (2x16GB) RDIMM Memory slots: 24 DIMM slots Memory type: 2R x4 PC4-2133P-R Included hard drives: Supports up to (8) SFF SAS/SATA/SSD hot plug drives Storage Capacity: 1.6TB Optical drive type: Slim SATA DVD-RW Network controller: 1Gb 331FLR Ethernet Adapter 4 Ports per controller and; 10Gb 533FLR-T FlexFabric Adapter 2 Ports per controller Storage controller: (1) Smart Array P440ar/2GB FBWC Form factor: 2U rack Ports: Should have at least 4 USB 2.0, 1 microphone in, 1 headphone/line-out, 1 serial, 1 parallel, 2 PS/2, 1 audio in, 1 audio out, 1 RJ-45, 1 external VGA monitor Energy efficiency: ENERGY STAR® qualified Keyboard: USB Keyboard Input devices: USB Mouse Warranty – year(s): 3 Yrs Hardware Warranty Repair with On-site Service			
11.	KEYBOARD VGA MOUSE (KVM) SWITCH	Computer Connections: Direct: 8 Port Selection: Hotkey, Pushbutton, OSD Connectors 2 x USB Type A Female 1 x HDB-15 Female Console Ports: 1 x Mini Stereo Jack Female 1 x Mini Stereo Jack Female 8 x SPHD-15 Female KVM Ports: 8 x Mini Stereo Jack Female 8 x Mini Stereo Jack Female Firmware Upgrade: 1 x RJ- 11 Female Power: 1 x DC Jack			

		<p>Switches</p> <p>Ports: 4 x Pushbutton Firmware Upgrade: 1 x Slide Reset: 1 x Semi-recessed Pushbutton</p> <p>LEDs</p> <p>Online: 8 Selected: 8 Power: 1</p> <p>Emulation</p> <p>Keyboard / Mouse: USB Video: 2048 x 1536; DDC2B Scan Interval: 1-255 Seconds Power Consumption: DC5V, 3.4W</p> <p>Environmental</p> <p>Operating Temperature: 0-50°C Storage Temperature: -20-60°C</p> <p>Warranty</p> <p>1 year</p>			
14.	27U RACK CABINET	<p>Back Door Type: Steel Mesh / Glass door Casters: Included Fan(s): No Frame Type: Enclosed Cabinet Front Door Type: Steel Mesh Industry Standards: EIA RS310-D Key Lock: Yes Rack Type: 4-Post Side Panel Type: Solid Steel U Height: 27U Wall mountable: No Included in Package: 1 - 42U Server Rack 1 - Integrated cable management system 4 - Leveling feet 4 - Cable access caps 1 - Allen key for skid removal 1 - Set of keys for doors and sides 1 - Package of mounting screws</p>			
14.	3000VA SMART-UPS	<p>Output power capacity: At least 3000 VA Nominal Output voltage: 230V Nominal Input voltage: 230V Output connections: (8) IEC 320 C13</p>			

		<p>Topology: Double Conversion Online</p> <p>Surge protection: Should have surge protection</p> <p>Bypass: Internal Bypass (Automatic and Manual)</p> <p>Warranty: 2 years</p> <p>Crest Factor: up to 5 : 1</p> <p>Battery type: Maintenance free: leak proof</p> <p>Included Battery One (1)</p> <p>Modules:</p> <p>Available Battery Module Four (4)</p> <p>Slots:</p> <p>Audible alarm: Alarm when on battery: distinctive low battery alarm: configurable delays</p> <p>Typical recharge time: 4 hours</p> <p>Control panel: Multi-function LCD status and control console</p> <p>Status indicators: On Battery: Replace Battery: Overload and Bypass Indicators</p> <p>Regulatory Approvals: C-tick, CE, EN 50091-2, EN 60950, IRAM, VDE</p> <p>Warranty: 2 years</p>			
15.	Biometric Access	<p>Type: Fingerprint access control</p> <p>Compatibility: Weigand compatible. Support 26 bit or 37 bit Wiegand communication</p> <p>Identification Method: Two factor authentication (Fingerprint and PIN) with the option of using one</p> <p>Connectivity: Network TCP/IP Connection</p> <p>Display: LCD Display</p> <p>Fingerprint capacity: 50 users</p> <p>Technology: Optical Sensor technology</p> <p>Warranty: 2 years</p> <p>Power backup: Should have a power backup solution that can last for not less than eight (8) hours</p> <p>Management Interface: Should be accessed through a web interface that can manage the enrolment of users, manage users and provide audit trails on all the activities.</p> <p>User enrolment: There should be a user enrolment scanner or can be done using an administrator card.</p> <p>Storage: Centrally managed storage</p> <p>Interfaces:</p> <ul style="list-style-type: none"> • Door Sense and Door Relay • Exit Switch and Exit Reader • Output Port and Auxiliary Input <p>Tamper Detection: Yes</p>			
16.	IP CCTV Camera	<p>Environment: indoor</p> <p>Type: mini fixed dome</p> <p>Sensor: 1/2.8" progressive CMOS</p> <p>fixed-focal, focal length: f = 2.8 mm, aperture: F1.8,</p> <p>Lens: field of view: 113° (horizontal), 63° (vertical), 136° (diagonal)</p> <p>Audio: audio input, G.711, G.726, built-in microphone with</p>			

		<p>effective range: 5 meters</p> <p>Power:IEEE 802.3af PoE Class 1</p> <p>OS: Microsoft Windows 10/8.1/8/7/Vista/XP/2000,</p> <p>Compatibility: browser: Mozilla Firefox 7~10 (streaming only), Internet Explorer 7/8/3/10/11, VLC: 1.1.11 or above, QuickTime: 7 or above</p> <p>Resolution:1920x1080</p> <p>Compression:H.264, MJPEG</p> <p>Frame-rate:30 fps @ (1920 x 1080)</p> <p>Bandwidth control: adjustable resolution, quality and bit rate, Smart Stream II</p> <p>Minimum illumination:0.05 Lux @ F1.8</p> <p>Imaging: time stamp, text overlay, flip & mirror, configurable brightness, contrast, saturation, sharpness, white balance, exposure control, gain, backlight compensation, 3D noise reduction</p> <p>Privacy masking:yes</p> <p>Number of users:10</p> <p>Alarm detection: video motion detection, manual trigger, digital input, periodical trigger, system boot, recording notification, camera tampering detection, audio detection</p> <p>Alarm action: event notification using HTTP, SMTP, FTP, NAS server and Micro-SD card, file upload via HTTP, SMTP, FTP and NAS server</p> <p>Power:IEEE 802.3af PoE Class 1</p> <p>Network:RJ-45</p> <p>Audio:audio input</p> <p>Other:1 digital output</p> <p>Dimensions:90 x 50mm</p> <p>Warranty:2 years</p> <p>Certifications:CE, LVD, FCC class B, VCCI, C-tick</p> <p>Mounting methods:wall, ceiling</p> <p>Power consumption:max. 3W</p> <p>Dynamic DNS:yes</p> <p>Protocols supported: IPv4, IPv6, TCP/IP, HTTP, HTTPS, UPnP, RTSP/RTP/ RTCP, IGMP, SMTP, FTP, DHCP, NTP, DNS, DDNS, PPPoE, CoS, QoS, SNMP, 802.1X, UDP, ICMP, ARP, SSL, TLS</p> <p>QoS:yes</p> <p>ONVIF compliant:yes</p>			
17.	8 Channel NVR recorder for Megapixel IP Cameras	<p>Main Processor: High Performance Dual-Core Embedded Microprocessor</p> <p>System Resources: Pentaplex function: live, recording, playback, backup & remote access</p> <p>Control Mode: Front panel, USB mouse, IR remote control, Network, Specialized PTZ</p>			

		<p>Keyboard</p> <p>IP Camera Inputs: 8 RJ45 POE Inputs Avalonix, Arecont Vision, AXIS, Canon,</p> <p>IP Cameras Supported: Dynacolor, Panasonic, SAMSUNG, SANYO, SONY, ONVIF</p> <p>Video Outputs: 1 HDMI (video and audio), 1 VGA</p> <p>Display Split: 1 / 4 / 8 / 9</p> <p>Monitor Display Resolution: 1920x1080, 1280x1024, 1280x720, 1024x768</p> <p>Privacy Masking: 4 self-defined four-sided zones for privacy masking for each camera</p> <p>Video Overlays: Camera title, time, video loss, camera lock, motion detection, recording</p> <p>Video Compression: H.264 / MJPEG</p> <p>Recording Resolutions: 5MP (2560x1920, 3MP (2048x1536), 1080P(1920x1080), 720P (1280x720), D1 (704x480)</p> <p>Recording Speed: 240fps @ D1, 120fps @ 720p, 60fps @ 1080p</p> <p>Recording Bit Rate: 200 Mbps total incoming</p> <p>Recording Quality: CBR, VBR (1-6 level, level 6 is the best)</p> <p>Recording Mode: Manual, Schedule (Regular, Continuous), MD (Video detection: Motion detection, Camera blank, Video loss), Alarm, Stop</p> <p>Recording Priority: Manual > Alarm > Motion Detection (MD) > Regular</p> <p>Recording Interval: 1-120 min (default: 60 min)</p> <p>Motion Detection: Zones: 396 (22x18), Sensitivity: 1-6 (level 6 is highest)</p> <p>Video Detection: Motion, Video Loss, Camera Blank</p> <p>Trigger Events: Recording, PTZ movement, Tour, Alarm, Email, FTP, Buzzer & DVR Screen Notifications</p> <p>Alarm Inputs: 4 Channel</p> <p>Alarm Relay Output: 2 Channel</p> <p>Playback View: 1 / 4 / 8 / 9 cameras</p> <p>Search Mode: Time/Date, Alarm, MD & Exact search (accurate to second), Smart search</p> <p>Playback Functions: Play, Pause, Stop, Rewind, Fast play, Slow play, Next file, Previous file, Next camera, Previous camera, Full screen,</p>			
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		<p>Repeat, Shuffle, Backup selection, Digital zoom</p> <p>Backup Mode: USB Flash drive , USB HDD , USB CD&DVD-RW , eSATA HDD , Network download</p> <p>Ethernet: 1x RJ-45 port (10/100M/1000M)</p> <p>Network Functions: HTTP, TCP/IP, UPNP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPOE, DDNS, FTP, Alarm Server, IP Search</p> <p>Hard Disk: 2 SATA ports, 1TB Each</p> <p>Hard Disk Management: HDD Group, HDD hibernation technology, HDD faulty alarm & Raid (Redundancy)</p> <p>USB Interface: 2x USB2.0 (mouse control and USB backup)</p> <p>RS232: PC communication</p> <p>RS485: PTZ control</p> <p>Warranty: 2 years</p>			
18.	Virtualization Software	<p>Hypervisor Type: 64-bit bare metal Hypervisor</p> <p>Control Domain: 64-bit Control Domain</p> <p>Hardware Compatibility List (HCL) Support: Ensure all commonly used hardware types are tested and supported with Hypervisor</p> <p>Multi Server Management with GUI: Allow for the management of hosts and resource pools (collections of hosts) in a simple to use scalable manner.</p> <p>Active Directory Integration: For support of multiple user accounts on a server or pool, utilize Microsoft Active Directory services to authentication.</p> <p>Role-Based Administration and Control (RBAC): RBAC should allow you to assign users, roles and permissions to control who has access to hosts.</p> <p>Virtual Applications and Virtual Desktops: Provide the ability to group multiple VMs together, to startup, shut down, set HA and recovery order policies.</p> <p>Dynamic Memory Control(DMC): DMC automatically adjusts the amount of memory available for use by a guest VM's operating system.</p> <p>Performance Reporting and Alerting: Provides the ability to monitor VM workload and host infrastructure performance, for compute, memory, network and disk metrics. Administrative alerts can also be defined.</p> <p>Licensing: Perpetual</p> <p>Live Memory VM Snapshot and Revert: Provide a mechanism that can take a snapshot of a VM storage, memory and metadata at a given time to generate application consistent point-in-time snapshots.</p> <p>Live VM Migration support: Compute workloads between two different hosts within a resource pool, allows administrators to manually manage the spread of load across their infrastructure and eliminate any outages from planned infrastructure downtime. The live migration of a VM's storage, enabling administrators to select a new target SR for each of VM's VDIs and moving</p>			

		<p>Heterogeneous Resource Pools: Enable new hosts and CPU versions to be added to existing pools, with support for all the VM-level features such as live migration you expect.</p> <p>Health Check: Enabling IT administrator to run reports to determine infrastructure health, and whether it requires updates or is misconfigured.</p> <p>VM Conversion Manager: Enable administrators to connect to Virtualization software infrastructures and batch migrate many VMs to current VM pools with minimal steps and configuration.</p> <p>Dynamic Workload Balancing & Audit Reporting: Gives system administrators deep insight into system performance, allowing infrastructure optimization, host power management and audit reporting.</p> <p>Docker Container Management: Enables infrastructure administrators to monitor and manage environments leveraging either Linux or Windows based Docker implementations.</p> <p>Networking: Support Open Virtual Switch (OVS), Distributed Virtual Switch Controller (DVSC), Cross-Host Private Networks</p> <p>Site Recovery Manager: Enable recovery of VMs from catastrophic hardware failure of the compute, storage and/or network layers.</p> <p>Shared Storage Connectivity: Connectivity to all types of local and shared storage, including EXT3, NFS v3 & v4, iSCSI, and FC HBA & open-FCoE.</p> <p>Support and Maintenance period: 2 years</p> <p>Number of servers supported: 12</p>			
19.	Visual Studio Enterprise Edition 2017 IDE	<ul style="list-style-type: none"> • Volume Licensing programs • Perpetual License terms 			
20.	Network Accessories	Not Applicable			
21.	Networking Labour Cost	Not Applicable			

The Template Filled and Signed by

Name

Signature.....

Contacts

Date:..... **Company Stamp**.....