KENYA REVENUE AUTHORITY

ISO 9001:2015 CERTIFIED

ADDENDUM/CLARIFICATION SET "1"

22nd January 2020

To all Prospective bidders,

TENDER NO.KRA/HQS/NCB-049/2019-2020- SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF DATA CENTER SERVERS AND DATA RACK SWITCHES

Kenya Revenue Authority wishes to inform prospective bidders of the clarifications highlighted below for the tender for the above tender.

Table 1: Clarification to Bidder's Query

Tender Page No.	Title	Sub-Title-Clause/ Number	Description in the Tender document	Bidders Questions	KRA's Response
Page 26	A. Blade Centre Servers - BLADE CHASSIS	A1. Chassis Enclosure	Form Factor: 10U modular | enclosure that can support between 12 to 16 half height blade servers fully Populated	Assuming that KRA is looking for fully populated Blade Chassis, what if our proposed model can contain 14 blades per chassis? Will KRA accept 3 X 14 - 42 blades in total of 3 Chassis? If not, kindly quantify.	The requirement is for an enclosure that can support up to 16 blades fully populated
Page 26	A. Blade Centre Servers - BLADE CHASSIS	1	Half-height blade with up to 16 nodes per enclosure	If the Blade Servers proposed by us can contain only 14 Blades per Chahssis, then can we quote 3 fully populated chassis only as per the tender?	Refer to the above clarification
Page 26 & 27	A. Blade Centre Servers- BLADE CHASSIS	6 & 8	(a) Serial numbered item 6: 2 x PCIe 3.0 (x8) mezzanine cards (b) Serial numbered item 8: 2x 1 Gigabit Ethernet ports, 2x10 GB Ethernet ports, that support network virtualization, 2x16G FC HBA	The two numbers mezzanine cards per Blade provides two 10GB Ethernet ports & two 16GB FC Ports. These two number 10GB Ethernet ports provides 1GB Ethernet functionality also. The adaptors mentioned as item serial number 8 seems to be a duplication of Item serial number 6. Hope KRA is looking for total of two numbers 10GB Ethernet ports and two numbers 16GB FC ports per Blade. Kindly clarify	Four (4) numbers 10GB Ethernet ports and two numbers 16GB FC ports per Blade is acceptable

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| Page 26 | A. Blade Centre Servers- BLADE CHASSIS | 5 & 7 | a) Item serial number 5. RAID controller RAID 0, 1, 1E. and 10 (b) Item serial number 7 2x 1.8" Hot-plug Flash NVMe PCIe SSD, 2TB | Both RAID controller and NVMe Disks are asked vide these two line item specification Unlike Storage NVMe Disks, the Server NVMe Disks do not support RAID. Hence the RAID controller functionality cannot be used within Blade for NVMe Disks Kindly clarify still KRA is looking for RAID controller per Blade? | KRA is looking for blades delivery having at least 2x SSD disk with capacity of at least 1TB of local storage after the necessary **raid/protection/** redundancy mechanism have been configured the |

The following line items of the tender's clause by clause requirements have been amended as tabulated below

Table 2: New Technical Requirements

NO.	ITEM	FEATURE	PREVIOUS REQUIREMENT	CURRENT/ NEW REQUIREMENT
1	Blade Chassis (Page 26)	Feature no. 1 (Chassis Enclosure)	Form Factor: 10U modular enclosure that can support between 12 to 16 half height blade servers fully Populated	1) Page 26 Blade Chassis item No 1(Chassis Enclosure) to read "Form Factor: modular enclosure that holds up to sixteen (16) half-height blade servers fully populated".
2	Blade Servers (Page 26)	Feature no. 2 (Processor)	2 x intel® Xeon® processor E5-2600 v4 product family or higher	**Item No 2** (Processor) to read "At least 2 x Intel® Xeon® processor E5-2600 v4 product family 18 core or higher".
		Feature no. 3 (Cache)	At least 16 core, 2.5 MB per core	**Item No 3** (Cache) to read "At least 2.2 MB per core".
		Feature no. 7 (Primary Storage HDD)	2x 1.8" Hot-plug Flash NVMe PCIe SSD, 2TB	**Item No 7** (Primary Storage HDD) to read "2x SSD disk with capacity of at least 1TB of local storage after raid/protection".
3	High Performance Servers (Page 27)	Feature no. 3 (Processor)	At least 4X 2nd Generation Intel® Xeon Scalable processors, 2.4GHz, 10Core 14Mb Cache,	**Item No 3** (Processor) to read "At least : 4 x, 2nd Generation Intel® Xeon Scalable processors, 2.4GHz, 18 core".
		Feature no. 5 (Storage)	Hot swappable at least 4 TB NVMe	**Item No 5** (Storage) to read "Atleast 2 x 2TB Hot swappable NVMe SSD".
		Feature no. 8 (Fibre Channel)	The server should have: • Redundant Dual Fibre Channel I/O	**Item No 8** (Fibre Channel) to read "The server should have: 2 x Dual Fiber Channel I/O modules with 8/16G FC

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			modules with 8/16G FC ports with SFP modules where applicable.	ports with SFP modules where applicable (fully populated)."

The following pages of the tenders have been amended as follows:

Clause By Clause Technical Specifications for Key Components:

- Clause by clause technical specification has a total score of 260 marks which shall be prorated to 80 marks.

- The prorated cut off score is 65 marks. Therefore, any bidder who scores below the prorated score of 65 marks shall be deemed non-responsive.

- Below is the updated technical specification with scores to be filled by the bidders.

- Pages 25 to 29 of the clause by clause technical specifications have been amended to include maximum score per line item as follows:

Item 3A: Blade Centre Servers

	Feature	Minimum Specifications	Bidder's Response	Max. Score
Blade Chassis				
	Brand & Model	Internationally recognized, mature brand (Specify)		
1.	Chassis Enclosure	Form Factor: modular enclosure that holds up to sixteen (16) half-height blade servers fully Populated		5
2.	Power Supplies	Up to six each at least 2600W hot-plug smart power supplies supporting 3+1, 4+2, and 5+1 power supply redundancy		5
3.	Cooling Fans	At least 5 hot-pluggable, redundant fan modules		6
4.	Input Devices	Flexible at the box Control Panel with interactive Graphical LCD that Supports initial configuration wizard, Local server blade, enclosure, and module information and troubleshooting		2
5.	Enclosure I/O Modules	Redundant converged I/O network modules with the following minimum capabilities : • 10Gb Ethernet connectivity with FCoE and converged iSCSI deployment • Converged 1/10Gb Ethernet switch with at least 10GbE ports (16 internal), 6 X 10GbE uplink ports • Uplink connectivity for 1/10Gb Ethernet ports • At least 24 8/16Gb FC –(16 internal, 8		5

		uplink)		
6.	Management	Standard Chassis Management Controllers which provide: • Single secure interface for inventory, configuration, monitoring, and alerting for the chassis and all components • Multi-chassis management capability from a single, embedded, agent-less interface • Automated and embedded one-to-many blade BIOS and firmware updates, independent of the OS • Real-Time Power/Thermal Monitoring and Management • Real-Time System AC Power Consumption with resettable peak and minimum values • System-level power limiting and slot-based power prioritization • Fan speed control Management • KVM switch		4
7.	External Storage Options	Supports Hitachi and EMC VNX storage systems		5
8.	Rack Support	Should be accompanied by its mounting rails		1
9.	Rack	One (1) Standard 42U Server rack with dual PDUs for every three (3) blade systems		2
10.	Power	200 - 240 VAC, 50Hz		1

Blade Servers

1.	Form Factor	Half-height blade with up to 16 nodes per enclosure		5
2.	Processor	At least 2 x Intel® Xeon® processor E5-2600 v4 product family 16 core or higher		5
3.	Cache	At least 2.2 MB per core		5
4.	Memory	1TB in 64GB DDR4 2400MT/s DIMMs (24 DIMM slots)		8
5.	Raid Controller	RAID 0, 1, 1E, and 10		5
6.	I/O Mezzanine cards	At least 2 x PCIe 3.0 (x8) mezzanine cards		5
7.	Primary Storage HDD	4 x 1.8" SSD, 2TB or 2 x 2.5" PCIe SSD's		5
8.	Adapters	Two Gigabit Ethernet ports and two 10 GB Ethernet ports that support network virtualization.		5
9.	Video card	at least Integrated 16MB video card		5
10.	Operating System	Should Support at least Microsoft windows Server 2008, Red Hat Linux, Suse Linux, Microsoft Hyper-V, Vmware ESX and Citrix XenSever		8
11.	Warranty	3yrs customer replaceable unit and onsite limited warranty for both chassis and blades		8

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	Total Marks			100

Item 3B: High Performance Intel Servers

	Feature	Minimum Specifications	Bidder's Response	Max. Score
1.	Brand & Model	Internationally recognized, mature brand (Specify)		5
2.	Form factor	Rack mountable, 3U with mounting rails One standard 42 U Server rack with dual PDUs for every three (3) servers supplied		3
3.	Processor	At least : 4 x, 2nd Generation Intel® Xeon Scalable processors, 2.4GHz, 18 core		5
4.	Memory	1TB DDR4 upgradable to 6 TB		5
5.	Storage	Atleast 2 x 2TB Hot swappable NVMe SSD		5
6.	Raid Controllers	Support RAID 0, 1, 5 & 10		2
7.	Network Interface	• Four integrated 1/10 Gigabit Ethernet ports with full duplex /TCP/IP Offload Engine (TOE). • At least two Converged Network Adapters (1/10GE) and (FCoE). • Support a converged network. • Must support NIC teaming in an active/active configuration		2
8.	Fibre Channel	The server should have: • 2 x Dual Fiber Channel I/O modules with 8/16G FC ports with SFP modules where applicable (fully populated).		5
9.	Expansion Slots	At least 4 x PCIe 2.0 slots		3
10.	IO Ports	At least 1 VGA Port, 1 Serial Port and at least 4 USB 3.0 Slots		2
11.	Server Management	• It should have embedded server management system (ILOM) to provide a single point of management for the entire solution from a single pane. It should provide all configuration management, monitoring and reporting tasks. • Should support industry standard management interfaces of IPMI and SNMP		5
12.	Operating System	Should Support at least Microsoft windows server 2008, Red Hat Linux, Suse Linux, Microsoft Hyper-V, Vmware ESX and Citrix XenSever		5
13.	Cooling fans	At least 6 hot plugs fans with full redundancy		6
14.	Power supply	Hot plug power supplies with full redundancy		2
15.	Warranty	3yr customer replaceable unit and onsite limited warranty		5
	Total Marks			60

Item 3C: Data Rack Switches

	Feature	Minimum Specifications	Bidders' Response	Max. Score
1.	Brand & Model	Internationally recognized, mature brand (Specify)		5
2.	General Descriptive Requirement	High-density, High performance, Data centre fabric switch which provides Gb Ethernet and Fibre Channel Over Ethernet (FCoE) Small Form-Factor Pluggable Plus (SFP+) server ports and Gb Ethernet and FCoE SFP+ uplink ports in a compact 1 rack unit (1RU) form factor. The appliance MUST be capable of providing a seamless integration with the existing KRA network.		5
3.	Model and Technology	Mature internationally recognized brand, in existence for at least 5 years(bidder must specify brand and model)		5
4.	Layer 2 features	• Layer 2 VLAN trunks • IEEE 802.1Q VLAN encapsulation • Ether-Channel technology on uplinks • Advanced Port Channel hashing • Pause frames (priority flow control [PFC] and IEEE 802.3x) • Private VLANs (promiscuous only on uplinks) • Auto negotiation to 1/10GBASE-T; full duplex on host interfaces		5
5.	Number and type of I/O interfaces	Thirty-two(32) -1/10GBase-T access ports Eight (8)-10Gigabit Ethernet and fabric ports capable of using short reach(SR) and long reach(LR) SFP+		10
6.	Expansion and Scalability	The switch access layer should be highly scalable allowing highly scalable 1G and 10G Ethernet environments.		10
7.	Switch optics type	• Fibre: SFP+ optics (SFP-10G-SR and SFP-10G-LR) • Copper: 10 Gigabit Ethernet SFP+ passive Twin ax copper cables (SFP-H10GB-CU1M, SFP-H10GB-CU3M, and SFP-H10GB-CU5M) and active Twin ax copper cables (SFP-H10GB-ACU7M and SFP-H10GB-ACU10M)		10
8.	Fabric speed	40 Gbps in each direction (80 Gbps full duplex)		10
9.	Performance	The switch should support low-latency 1/10 Gigabit Ethernet, high-performance computing (HPC) and supports virtual machine-aware networks.		5
10.	Indicator and port specification	• System status: Green (operational), amber (fault), flashing amber (POST boot up), and off (no power)		5

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		• Locator LED: Bright blue locator • Port status: Green (link established), amber (administratively disabled), and flashing amber (fault) • Fan status: Green (operational) and amber (fault) • Power status: Green (operational) and amber (fault)		
11.	Power and cooling fans	Hot-swappable fan trays Dual power supply Maximum power consumption: 400Watts		5
12.	Management requirements	The switch should be able to support single point of management where all top-of rack switches can be managed from the parent core switch.		5
13.	Proof of Certification/accreditation/manufacturer's authorization	• State and provide proof of a certification program subscription		5
14.	Support and warranty	• At least 3 years on parts, labour and software • In addition, the equipment MUST include the manufacturer's premier technical support services including: Accelerated hardware replacement options, Operating system updates, Access to Manufacturer's technical assistance team, online troubleshooting / support tools and proactive problem diagnosis services.		15
	Total Marks			**100**

The addendum/clarifications form part of the bidding document and is binding to the bidder. All other terms and conditions of the tender remain the same. You are therefore required to immediately acknowledge the receipt of this addendum/clarifications.

Regards,

Benson Kiruja
For: Deputy Commissioner - Supply Chain Management

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