



KENYA REVENUE AUTHORITY

ISO 9001:2015 CERTIFIED

31st 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

RE: ADDENDUM/CLARIFICATION SET "2"

Kenya Revenue Authority wishes to inform prospective bidders of the clarifications highlighted below for the tender for data center servers and rack switches.

SR/No.	RFP Page No.	RFP Page Title	Sub-Title- Clause/ Number	Description in the Tender document	BIDDERS QUESTIONS	KRA's RESPONSE
1	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 blade servers that will provide at least 1728 cores, in a configuration of 2 CPU's per blade with at least 18 cores per processor. Any hardware configuration that can meet this requirement without the space requirement for the chassis exceeding 2 standard 42U racks is acceptable Please refer to clarification 1 above
2	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 Chassis, then can we quote 3 fully populated chassis only as per the tender?	

3	Page 26 & 27	A. Blade Centre Servers- BLADE CHASSIS	6 & 8	<p>(a) Serial numbered item 6: 2 x PCIe 3.0 (x8) mezzanine cards</p> <p>(b) Serial numbered item 8: 2x 1 Gigabit Ethernet ports, 2x10 GB Ethernet ports, that support network virtualization, 2x16G FC HBA</p>	<p>The two numbers mezzanine cards per Blade provides two 10GB Ethernet ports & two 16GB FC Ports.</p> <p>These two number 10GB Ethernet ports provides 1GB Ethernet functionality also.</p> <p>The adaptors mentioned as item serial number 8 seems to be a duplication of Item serial number 6.</p> <p>Hope KRA is looking for total of two numbers 10GB Ethernet ports and two numbers 16GB FC ports per Blade. Kindly clarify</p>	<p>The requirement is for 2x(1/10 GB) Ethernet port and 2x16GB FC ports per blade</p>
4	Page 26	A. Blade Centre Servers- BLADE CHASSIS	5 & 7	<p>(a) Item serial number 5: RAID controller RAID 0, 1, 1E, and 10</p> <p>(b) Item serial number 7 2x 1.8" Hot-plug Flash NVMe PCIe SSD, 2TB</p>	<p>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</p> <p>Kindly clarify still KRA is looking for RAID controller per Blade?</p>	<p>The requirement is for blades with at least a total 1TB of local storage after the necessary RAID/Protection mechanisms have been configured. The disks can be SAS or SSD. The proposal should include the controller necessary to ensure redundancy and protection of the disks</p>
5	Page 28	Data Rack Switches	2	<p>The appliance MUST be capable of providing a seamless integration with the existing KRA network.</p>	<p>Kindly advise on when we can conduct a site survey to assess what's currently in the network.</p>	<p>The requirement is for fabric extenders (top of the rack switches) as per the specifications</p>



6	Page 28	Data Rack Switches	5	<p>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+</p>	<p>Does this mean the switch should have 48 ports 10GBase-T interfaces? Also the number of fibre ports is not stated in the statement.</p>	<p>The requirement is for 48 x 1/10 Gigabit Ethernet and unified port host interfaces (SFP+) and up to 6 QSFP+ 10/40 Gigabit Ethernet fabric interfaces The unified ports to provide connectivity to 2-, 4-, 8-, and 16-Gbps Fibre Channel</p>
7	Page 28	Data Rack Switches	7	<p>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)</p>	<p>Kindly clarify on the quantities for each Cables/optics.</p>	<p>Refer to the above clarification for the number of ports per switch</p>



8	Blade Centre Servers- BLADE CHASSIS				We are in receipt of the below mentioned tender and wish clarity on page 29 of the tender document as follows: Kindly confirm whether you require 3 Blade Chassis fully populated or only one chassis with 3 blades. Pg 29 items no 1 is not clear. Please Identify the reason for the requirement stating support for FCOE on the switches bit, as they have Ethernet Ports option on the Chassis requirements. And how many SFP+ modules do you need for per switch, multi or single SFP+ module , How about the distance of SFP modules?	Please refer to clarification 1 above
9	Page 28				BLADE CENTRE SERVERS Chassis Enclosure: Must the chassis hold 16 servers or can we go with one of 12 servers as this will impact the total number of servers? Servers: is there a total number of servers that are required?	Please refer to clarification 1 above
10						Please refer to clarification 1 above

11			<p>Enclosure I/O Modules:</p> <p>Can we quote for 12 internal 10GBE uplinks</p> <p>Can we do 10GB SFP or this is not supported on the Authorities environment</p> <p>Must we include 1GBE Ethernet uplinks on the modules?</p> <p>Blade Servers:</p> <p>Form Factor: As you had mentioned in Chassis Enclosure to support between 12 to 16 does this still hold here or must we do 16 per enclosure</p>	<p>10GB SFP can be proposed for external uplinks</p> <p>All Ethernet uplinks should support both 1G and 10G.</p>
12			<p>I/O Mezzanine cards: Must the Mezzanine cards be PCIe 3.0 or standard Mezzanine card will be ok?</p> <p>Primary Storage: Can we propose normal SSD instead of NNMe if NVMe is out of support or capacity not sufficient?</p> <p>Kindly clarify on the 16Mb video Card</p> <p>DATA RACK SWITCHES</p> <p>Specify how many SFP, SPF+ are required.</p>	<p>For blade server chassis, please refer to clarification 1 above</p> <p>PCIe 3.0 mezzanine cards are required</p> <p>SSD can be proposed.</p> <p>Blade chassis should have an integrated video controller.</p>
13				<p>The switches should be fully populated</p>



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14	Chassis Enclosure – page 25			Form Factor: 10U modular enclosure that can support between 12 to 16 half height blade servers fully Populated	KRA has requested for 10U modular enclosure which is old technology, can the bidder propose newer technology such as 7U modular enclosure?	For blade server chassis, please refer to clarification 1 above
15	Processor – page 26		2 x intel® Xeon® processor E5-2600 v4 product family or higher	2 x intel® Xeon® processor E5-2600 v4 product family or higher which is end of life, can the bidder propose the latest Intel generation of processors - Intel Cascade Lake Processors?	The configurations stated are minimum requirements. Bidders can propose superior model	
16	Memory – page 27		1TB in 64GB DDR4 2400MT/s DIMMs (24 DIMM slots)	1TB in 64GB DDR4 2400MT/s DIMMs (24 DIMM slots) which is end of life, can the bidder propose the latest generation of memory which is DDR4 2933MT/s	Bidders can propose latest generation of memory but the minimum capacity must be met	
17	Warranty - Page 27		"3yrs customer replaceable unit and onsite limited warranty for both chassis and blades		Can the bidder propose 3 years production support with 4 hours mission critical service?	The requirement is for 3yr customer replaceable unit and onsite limited warranty
18	Form factor – page 27		"Rack mountable, 2U with mounting rails One standard 42 U Server rack with dual PDUs for every three (3) servers supplied"	"High performance intel servers should support upto 112 Cores, 6TB memory, 122TB HDD, kindly confirm if the bidder can propose 3U to conform to this. Can we propose Deep racks (1600mm deep) to cater better for blade chassis that have deep form factor and dense cabling needs."	No Deep racks. For blade chassis configuration, please see clarification one above.	



19	Form factor – page 27			<p>"Rack mountable, 2U with mounting rails One standard 42 U Server rack with dual PDUs for every three (3) servers supplied"</p>	<p>Kindly confirm the exact number of 42U server rack required as the minimum specification KRA requirement is 3 separate rack</p>	<p>The bidder should propose sufficient racks to support their specific deployment architecture depending on the blade chassis chosen. Please refer to clarification one above. (also ensure sufficient rack space is left for top or rack switches per rack) For high performance servers the requirement is a 42U standard racks each with two (2) 32A, 230V, c13(20), c19(4), basic, zero U vertical PDUs for every 3 servers</p>
20	Fibre Channel - Page 27			<p>"The server should have: Redundant Dual Fibre Channel I/O modules with 8/16G FC ports with SFP modules where applicable." "3yrs customer replaceable unit and onsite limited warranty for both chassis and blades</p>	<p>Can we propose a dual Fibre Channel that supports upto 32G?</p>	<p>Yes you can. In this case, the HBA should be able to support 8G/16G/32G</p>
21	Warranty - Page 27				<p>Can the bidder propose 3 years production support with 4 hours mission critical service?</p>	<p>The requirement is for 3yr customer replaceable unit and onsite limited warranty</p>

22					Customer has requested for 3 Blade Centre Servers- chassis fully populated but from technical specification the customer has requested each chassis to support between 12 to 16 half blades, kindly clarify on the exact quantity required.	Please refer to clarification 1 above
23	Page 29 Standard Server Rack - Page 29	Blade Centre Servers- chassis fully populated - Standard Server Rack			Specification for Standard Server Rack have not been provided	Please refer to clarifications above
24					Most of the mandatory requirement are approaching EOL/EOS kindly advise if we can propose the most current specification	Any product proposed by bidders MUST not be End of Support or End of sale (EOS) in the next two years.
25	General				Kindly provide the locations the equipments are going to be deployed.	KRA Data Center
26	General				Will the scope include virtualization of the servers? If so, kindly advise on the virtualization technology.	The scope does not include virtualization however the technology is VMWARE
27	General				Will the scope include High Availability?	YES
28	General				Will the servers be connected to any SAN storage?	YES
29	General				Does KRA have a SAN switch for the server to storage connection?	YES KRA has A SAN SWITCH

30	General			If bidder's one time implementation and SLA (post implementation) and Is bidders' skills required or is it only delivery of equipment? If the bidder is deploying, kindly provide expected scope of work	As per the evaluation criteria
31	General			Most of the mandatory requirement are approaching EOL/EOS kindly advice if we can propose the most current specification	As per the tender title i.e. Supply, delivery, installation and commissioning
32	General				Any product supplied MUST not be End of Support or End of sale(EOS) in the next two years.
33	General	Blade Centre Servers- BLADE CHASSIS	The Blade chassis form-factor described mandates 10RU and able to slot 16 blade servers into single chassis.	This type of blade chassis presents a large failure domain to organizations which introduces high risk in the data center in case a chassis has a critical fault. When this happens, potentially 16 blade servers will be rendered offline as a result. Blade chassis failure can be a result of power outage in the rack, or component failure in the chassis itself	Can bidders propose the best practice blade architecture that meets or exceeds the compute, memory, RAM and network requirements that KRA requires Refer to clarification 1 above
	General		As a best practice, many OEMs are moving, and some already moved to a smaller failure domain architecture, where no more than 8 blade servers are slotted into a		



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	<p>single chassis. The advantages are that there is less risk of disruption in case of chassis failure and resilience is better managed across the datacenter. These multiple chassis are then distributed across multiple racks to avoid single rack issue affecting large set of servers.</p>			
34	<p>Chassis Enclosure: Form Factor: 10U modular enclosure that can support between 12 to 16 half height blade servers fully Populated: Does this mean any chassis that can take between 12 and 16 Blades is accepted</p>	<p>Refer to clarification 1 above</p>		
35	<p>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: It is mentioned that at least 2600 Watts Power supplies, does this mean that only the specified is required</p>	<p>NO this is the minimum requirement.</p>		
36	<p>Blade Servers Form Factor: Half-height blade with up to 16 nodes per enclosure. Does this mean that only chassis that can take 16 nodes are considered, please clarify because it contradicts with No.1 on Chassis enclosure?</p>	<p>Refer to clarification 1 above</p>		
37	<p>2x 1 Gigabit Ethernet ports, 2x10 GB Ethernet ports, that support network virtualization, 2x16G FC HBA: kindly clarify if 6 Adapters ports mentioned are required in one blade? Note Blade Servers</p>	<p>The requirement is for 2x(1/10 GB) Ethernet port and 2x16GB FC ports per blade</p>		

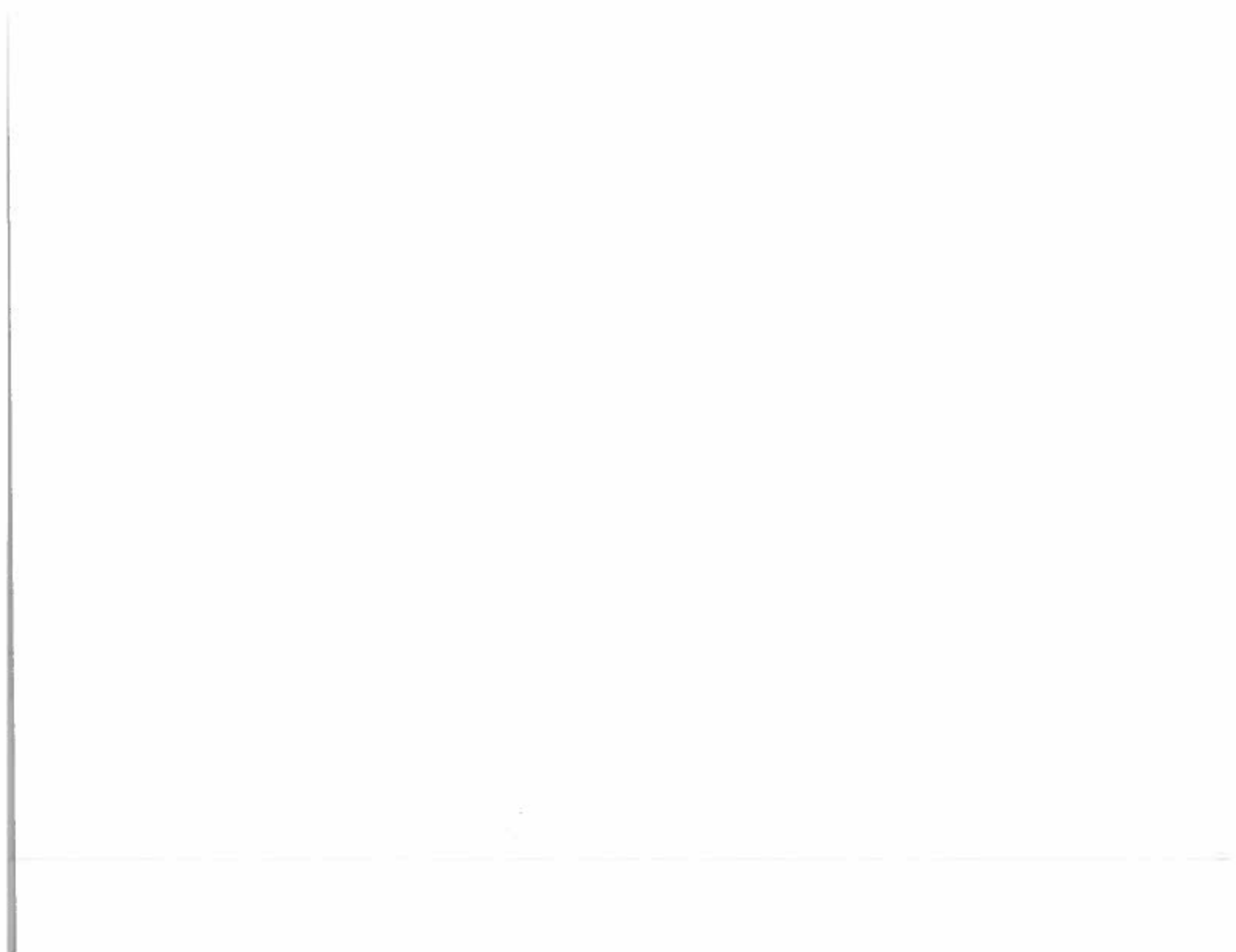
38	page 26 Refer to item 1 on Blade servers page 26			supports maximum of two Ada Blade Centre Servers- chassis fully populated 3 Nos: kindly specify the number of Blade servers required, since different chassis supports different number of blades e.g 12, 14 and or 16.	Refer to clarification 1 above
39	f			Type of Blade servers required: kindly clarify if you require e.g a) half-wide (single bay): - Two Hot swap disk, two processors supported (RAID 0 and 1) b) full-wide (two bays): -Four Hot swap Hard Disk Four Socket supported (RAID-0, RAID-1, RAID-5, RAID-6 and RAID-10)	Refer to clarification 1 above additionally KRA is looking for blades with at least a total 1TB of local storage after the necessary RAID/Protection mechanisms have been configured. The disks can be SAS or SSD. The proposal should include the controller necessary to ensure redundancy and protection of the disks

~~The~~ bidders are advised that this is the final set of clarification in line with Section II (Instruction to Tenderers) sub section 2.4.1 of the tender document.

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



38	page 26 Refer to item 1 on Blade servers page 26			supports maximum of two Ada Blade Centre Servers- chassis fully populated 3 Nos: kindly specify the number of Blade servers required, since different chassis supports different number of blades e.g 12, 14 and or 16.	Refer to clarification 1 above
39				Type of Blade servers required: kindly clarify if you require e.g a) half-wide (single bay): - Two Hot swap disk, two processors supported (RAID 0 and 1) b) full-wide (two bays): -Four Hot swap Hard Disk Four Socket supported (RAID-0, RAID-1, RAID-5, RAID-6 and RAID-10)	Refer to clarification 1 above additionally KRA is looking for blades with at least a total 1TB of local storage after the necessary RAID/Protection mechanisms have been configured. The disks can be SAS or SSD. The proposal should include the controller necessary to ensure redundancy and protection of the disks

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