

**(FREQUENTLY ASKED QUESTIONS WITH  
ANSWERS/ CLARIFICATIONS)**

# **Request for Bids Goods**

**(One-Envelope Bidding Process)**

## **Supply of Servers and Racks for Data centers**

Country:	<b>Pakistan</b>
Project Name:	<b>Pakistan Raises Revenue Program</b>
Implementing Agency:	<b>Federal Board of Revenue (FBR)</b>
Loan No:	<b>Credit No. 6435-PK</b>
Project ID No:	<b>P165982</b>
RFB No.	<b>1(13)/P&amp;CM/PO/2020-21</b>
STEP Ref. No	<b>Activity No. PK-FBR-226877-GO-RFB</b>



**Federal Board of Revenue**  
Revenue Division – Government of Pakistan

Requirements as per RFB	Question(s) by Bidder(s)/ Vendor(s)	Answer(s)/ Clarification(s) by FBR
<b>A. RACK MOUNTED SERVERS</b>		
<b>Processors and Power Supplies</b>		
<p>4x Intel® Xeon® Platinum 8200x processors @2.xx GHz, 26 cores each with 35MB L3 cache with Intel® 610+ chipset</p>	<p><i>Could we use the 3rd Generation "Platinum 8376H CPU" except required "8270 CPU", furthermore 8376H 3rd generation processor would be an ideal replacement for 8270 2nd generation processor. Since currently serious supply shortage for the 2nd Generation processor of this specific platinum series and causes delays in manufacturing.</i></p> <p><i>We would like to propose the 3rd Generation "8360H CPU" instead of 2nd Generation "8270 CPU", more precisely the ideal replacement would be 8360H/HL 3rd generation processor against 8270 2nd generation processor. This is also pertinent to mention here that currently there is a serious supply shortage for the 2nd Generation processor of this specific platinum series. The release of 4th Generation is around the corner and 2nd Gen will go obsolete well before 3rd Gen. Moreover, 2nd Gen processor has a long procurement chain at the moment and supply period of at least 15-20 weeks, therefore, requested to extend delivery time accordingly.</i></p> <p><i>Please note that delivery required in 75 days as mentioned in RFP. But keeping in view current COVID-19 Pandemic, Material Constraint, Container/Vessel availability issues, lockdown in different countries; it is not possible to deliver the stores within 75 days. Therefore, this is requested to please extend the delivery time lines as 22 to 24 weeks with consideration of Force Majeure.</i></p>	<p><b>Bidders are advised to quote 3<sup>rd</sup> Gen 83xx platinum series processor or equivalent replacing 2<sup>nd</sup> Gen 82xx platinum series processor.</b></p>
<p>Rack mounted 4U servers with redundant hot swappable Power supplies and fans.</p>	<p><i>The required servers' specifications are efficiently manageable in 3U servers which is space-effective in Data Center, so please advise that may we quote 3U servers?</i></p>	<p><b>Both 3U and 4U are acceptable.</b></p>
<b>Hard Drives</b>		
<p>2 x 512GB NVMe SSD for OS and 4x 1.8 TB+ 10k SAS hot swappable Hard Disk Drives.</p>	<p><i>512GB NVME SSD comes in client products i.e., Laptop/ desktop 480GB is the standard for enterprise grade SSDs, please amend and confirm so that we can quote accordingly.</i></p>	<p><b>Bidders are advised to quote 2 X 480GB NVMe SSD or equivalent replacing 2 X 512GB NVMe SSD.</b></p>

<b>Server RAID</b>		
Integrated RAID 1, 5, 6, and 10 with on-board RAID controllers, with Online Expansion, and hot swappable drives.	<i>The RFP requires onboard Raid controller, if we could quote standard PCIE based Raid controller instead considering some products have no onboard raid controller? Is NVME RAID 1 required?</i>	<b>Most of the known brands offer onboard controllers, so an onboard- Raid controller is required as per the RFB. Both controllers for SSD and SAS drive must support RAID 1, 5, 6, and 10.</b>
<b>Operating System Support</b>		
Support for all operating systems from Microsoft (X86), Linux, Ubuntu, Solaris Intel, RHEL, SUSE, VMware/Citrix/Oracle/Open, Hypervisors.	<i>What are the exact or precise OS versions required for compatibility, because HW can't guarantee to be compatible with all version for a certain OS if it is bare metal-based installation? Will these OS be installed on Virtual Machine or bare metal? Please specify the exact version of Windows 2019 and ESXI number. Secondly, which exact version of each OS FBR is currently using? Kindly specify. Do you also need Licensed operating system for the Servers? Please confirm if Solaris OS support is mandatory required as most of well-known brands do not support Solaris OS.</i>	<b>Quoted Server model must support previous, current, and upcoming versions of Microsoft (x86) and all versions of Linux, VMware/ Citrix/ Oracle/ Open Hypervisor, etc. Solaris or equivalent support is required in a Virtual environment at least, if the quoted brand does not support Solaris on bare metal. Licenses for operating systems are not required and are also not mentioned in the RFB published. Query regarding version of each OS FBR is currently using is irrelevant for the bidders.</b>
<b>KVM and Racks with all Accessories</b>		
Remote management solution Out of band management with licenses and Hardware Based KVM with keyboard for Console Management. All accessories which include installation (Power and cabling) of rack and servers and network connectivity as well.	<i>KVM is part of Rack Equipment and also added in server specifications. This shows that you require 75x KVMs with Each server which is not a good approach as KVM provides multi server management, please remove this clause or explain the specific requirement. For the Hardware Based KVM with keyboard for Console Management, how many ports of Digital KVM switch is required? We assume that power till rack, UPS, cooling, required patch cords for servers' connectivity, SFPs at Switches end will be responsibility of FBR. Please confirm.</i>	<b>KVM is required for only 5 racks. Each KVM must support 12 servers at least. Each rack must have one (01) KVM switch along with the keyboard, Console Management Panel (LCD) and allied cabling. Provision of 2 PDUs for each rack with rack is the responsibility of the supplier, whereas UPS, cooling, patch cords are the responsibility of FBR. Provision of SFP, connectors, special cables, etc. are also the responsibility of the supplier.</b>
<b>Install Media and Additional/ Optional (Good to Have) Features</b>		
Non-licensed Bootable media/ISO Files for latest version Windows and of ESXI with embedded drivers for server Hardware including, HBA, Network and Raid Windows 2019 and ESXI Media (Without Licenses).	<i>The required Windows 2019 and ESXI Media (Without Licenses) including drivers, is it acceptable if vendor provide FBR with an USB flash or DVD disk at the time of installation but not along with the server package box? Please advise. Please specify the Windows 2019 and ESXI exact version number required.</i>	<b>The bidder is required to provide only bootable media without a license for Windows 2016 &amp; 2019 and ESXI 6 &amp; 7. Bootable media i.e., USB drive, DVD disk are acceptable.</b>

<b>B. SERVER RACKS</b>		
Branded 42U Wide Rack with Cables, Rails & Fittings, having following features.	<p><i>For Racks requirement, will these racks will be installed in an open place in FBR data center or these will be placed in existing containment. Please clarify. If racks to be placed in containment, then please do share the containment details and dimensioning.</i></p> <p><i>42U size racks are available in two sizes 800x1000 &amp; 600x1000 which one is preferred size?</i></p>	<b>The rack will be placed in an open place but it must be also compatible with the containment. A standard Server rack is required i.e., 800x1000 with adjustable railings.</b>
Remote management solution Out of band management licenses and Hardware Based KVM with keyboard for Console Management.	<p><i>Please give detail specs of KVM is required. How many ports and is LCD required or not? below specs are not elaborating the details. KVM mention in rack specification, please confirm 1 KVM required with each rack?</i></p>	<b>KVM is required for only 5 racks. Each KVM must support 12 servers at least. Each rack must have one (01) KVM switch along with the keyboard, Console Management Panel (LCD) and allied cabling, as also addressed above. ILO/IBMC port are required in each server along with license if needed. One KVM is required with each rack, which support 12 servers each at least.</b>
Toolless blanking panels' 1U Modular tool less blanking panel kit (pack of 100pcs) for each site.	<p><i>Please confirm, Blanking panel (pack of 100 pcs) are required for each site (For 3 sites = 3 packs of blanking panel required).</i></p>	<b>Toolless blanket panel is required for all five (05) racks.</b>
<b>* Power Distribution Units PDUs</b>		
Branded Power Distribution Units (PDUs), having following features: Each Rack should have 2 vertically mounted metered PDUs with 42 x C13/C19 (combined) ports.	<p><i>Single PDU 0U Vertical type comes with a maximum 24 outlets/ports. For two PDU in each rack it will be total 48 Ports. Please confirm above highlighted 42 C13/19 are the total ports required in each rack? Does FBR need all C13 or C19 ports or can we mix and match for example one Vertical PDU having (20)C13 &amp; (4)C19? IEC309?</i></p>	<b>PDUs are required as per the published RFB.</b>
<b>Installation and Commissioning</b>		
	<p><i>We assume that vendor scope will be delivery of servers, racks with related accessories (as per RFP requirement), physical installation of equipment, power-up activity and firmware update (if required). OS Installation, application installation/ configuration will be responsibility of FBR. Please clarify.</i></p> <p><i>We assume that there will be no migration services involved. Please clarify.</i></p>	<b>Installation and commissioning of servers including firmware update and media installation will be the responsibility of the supplier. The remaining will be the responsibility of FBR, as there will be no application migration services involved during the installation and commissioning process.</b>