

Corrigendum Number 1: Procurement, Installation, Commissioning and Maintenance of Servers

IT Cloud Solutions/FY:2024-25/RFP/1310 Dated: 31/03/2025

Sl. No	RFP Page No	RFP Clause No	Existing Clause	Revised Clause
1	69	3. Operating Systems	Should be Compatible with Latest Windows server, Red Hat Linux/Openshift and VMware ESXi Server version 7.0 U3/VCF 4.5.2 and all later/upgraded/higher versions. Also, the supplied hardware should support all version upgrades coming in next 7 years. If hardware supplied by selected OEM is not compatible with these releases during 7 years from date of commissioning, bidder need to replace hardware with compatible VMware, Windows server, Red Hat Linux/Openshift release without any additional cost to the Bank.	Should be Compatible with Latest Windows server, Red Hat Linux/Openshift and VMware ESXi Server version 8.0.3 /VCF 4.5.2 and all later/upgraded/higher versions. Also, the supplied hardware should support all version upgrades coming in next 7 years. If hardware supplied by selected OEM is not compatible with these releases during 7 years from date of commissioning, bidder need to replace hardware with compatible VMware, Windows server, Red Hat Linux/Openshift release without any additional cost to the Bank.
2	66	E: GPU Rack Servers Type 1 (Category 5) , Clause # 4	Server should support minimum two NVIDIA H100 Tensor Core GPU card or Intel® Data Center GPU Max 1100 or AMD Instinct™ MI300X. On day one server should be populated with two cards and all required licenses (including Nvidia AI enterprise /equivalent) for GPU slicing with VMware, Nvidia enterprise tech support, training, inferencing etc.	Server should support minimum two NVIDIA H100 NVL 94 GB Tensor Core GPU card or AMD Instinct™ MI300X. On day one server should be populated with two cards and all required licenses (including Nvidia AI enterprise /equivalent) for GPU slicing with VMware, Nvidia enterprise tech support, training, inferencing etc.
3	61	A. Blade Server (Category 1) -> Clause # 12	ACPI 5.1 Compliant, PCIe 5.0 Compliant; WOL/equivalent technology Support; Microsoft/VMware/RHEL Logo Certifications; USB 3.0 support or better.	ACPI 5.1 Compliant, PCIe 4.0/5.0 Compliant; WOL/equivalent technology Support; Microsoft/VMware/RHEL Logo Certifications; USB 3.0 support or better.

4	66	For Category 2 to Category 6, Clause # 2	ACPI 5.1 Compliant, PCIe 5.0 Compliant; WOL/equivalent technology Support; Microsoft/VMware/RHEL Logo Certifications; USB 3.0 support or better.	ACPI 5.1 Compliant, PCIe 4.0/5.0 Compliant; WOL/equivalent technology Support; Microsoft/VMware/RHEL Logo Certifications; USB 3.0 support or better.
5	68	F: GPU Rack Servers Type 2 (Category 6) Clause#13	<p>The bandwidth requirement is as below:</p> <p>Frontend: In band + Storage Network:- 2 * 200 G Nvidia BF3 NIC per Server. The 2x200 G network should be splittable in 10/25 G network ports to accommodate the required bandwidth with existing Top of the rack switches. In case splitting is not possible, bidder must provide suitable intermediary switches to connect with Top of the Rack Switch.</p> <p>Backend: - 8x400G per server (GPU to GPU using InfiniBand/Ethernet switches and CX7 NIC). The InfiniBand/Ethernet switches needs to be supplied by bidder. OOB Mgmt.: - 2*10 G Port</p>	<p>The bandwidth requirement is as below:</p> <p>Frontend: In band + Storage Network: - 2 * 200 G Nvidia BF3 NIC or CX7 NIC per Server. The 2x200 G network should be splittable in 10/25 G network ports to accommodate the required bandwidth with existing Top of the rack switches. In case splitting is not possible, bidder must provide suitable intermediary switches to connect with Top of the Rack Switch.</p> <p>Backend: - 8x400G per server (GPU to GPU using InfiniBand/Ethernet switches and CX7 NIC) or 6x800Gbe OSFP ports for scale out. Optic Cables and Transceivers to connect the system to the switch The InfiniBand/Ethernet switches needs to be supplied by bidder. OOB Mgmt.: - 2*10 G Port</p>
6	80	Appendix-E Scope of Work and Payment Schedule 2. Description of Deliverables	The prices discovered through this RFP will be valid for a minimum period of three years from the date of initial purchase order.	The prices discovered through this RFP will be valid for a minimum period of two years from the date of initial purchase order.
7	68	F: GPU Rack Servers Type 2 (Category 6), Clause # 14 Expansion Slots	Minimum 10 PCIe 5.0 Type based x16 Slots supporting Ethernet, FC adapters for each server.	Minimum 10 PCIe 5.0 Type based x16 Slots supporting Ethernet for each server.
8	81	Appendix-E Scope of Work and Payment Schedule	Rate discovered will be valid for three years from the date of initial Purchase order and if there are requirements, Bank may place additional order for hardware up to 25%	Rate discovered will be valid for two years from the date of initial Purchase order and if there are requirements, Bank may place additional order for hardware up to 25% quantity for which RFP is floated.

		Clause#8 Scalability Requirements	quantity for which RFP is floated. The additional 25% quantity may be of any category/categories of the Servers/GPU.	The additional 25% quantity may be of any category/categories of the Servers/GPU.
9	100	Other Term & Penalties, Clause#6-k	<u>Preventive maintenance:</u> Vendor shall conduct preventive maintenance (including but not limited to inspection, testing, satisfactory execution of all diagnostics, cleaning and removal of dust and dirt from the interior and exterior of the Equipment, and necessary repair of the Equipment) once within first 15 days of the installation once within the first 15 days of every alternate month during the currency of the Contract on a day and time to be mutually agreed upon. Notwithstanding the foregoing Vendor recognizes the Bank's operational needs and agrees that the Bank shall have the right to require Vendor to adjourn preventive maintenance from any scheduled time to a date and time not later than 15 working days thereafter.	<u>Preventive maintenance:</u> Preventive Maintenance will be part of day 2 activities taken care by the bank.
10	73	Technical Specifications, H Racks Clause#1.d	d. Minimum Power Limit: The Minimum power limit of each chassis should be 10 kVA to accommodate the power needs of the equipment, ensuring that the rack can handle the required load.	d. Maximum Power Limit: The Maximum power limit of each chassis should be 12 kVA to accommodate the power needs of the equipment, ensuring that the rack can handle the required load.
11	19	11. DEADLINE FOR SUBMISSION OF BIDS	i. Bids must be submitted online on portal of Government e Marketplace i.e. https://gem.gov.in by the date and time mentioned in the "Schedule of Events".	i. Bids must be submitted online on eTender Portal of SBI i.e. https://etender.sbi by the date and time mentioned in the "Schedule of Events".
12	63	Appendix-C/ Technical & Functional Specifications/ C. Rack Servers (Category 3)/ 3. Processor	96 cores each socket, dual socket-192 cores (AMD EPYC 9655 or Intel Xeon 6972P)	96 cores each socket, dual socket-192 cores (AMD EPYC 9655 or Intel Xeon® 6787P (86 Cores @ 2.0 GHz))

13	69	Appendix-C/ Technical & Functional Specifications/ Category 2 to Category 6, the bidder must comply with below specifications /4 - Manageability	<p>For all the categories of the servers mentioned above i.e. from Category 2 to Category 6, the bidder must comply with below specifications.</p> <p>4. Should provide unified management suite that can monitor, configure and manage all the servers and chassis from the OEM deployed in the data center. Required Licenses has to be provided.</p>	<p>For all the categories of the servers mentioned above i.e. from Category 2 to Category 5, the bidder must comply with below specifications.</p> <p>4. Should provide unified management suite that can monitor, configure and manage all the servers and chassis from the OEM deployed in the data center. Required Licenses has to be provided.</p> <p>For Category 6 Servers Separate Management suite that can monitor, configure and managed all 8-GPU servers deployed in Data center.</p>																											
14	98	Appendix–L Other Terms and Penalties 6.d	Vendor shall ensure that faults and failures intimated by the Bank as above are set right within 4 hours of being informed of the same. In any case the Equipment should be made workable and available not later than the next working day of the Bank.	Vendor shall ensure that faults and failures intimated by the Bank as above are set right within 6 hours of being informed of the same. In any case the Equipment should be made workable and available not later than the next working day of the Bank.																											
15	132	Annexure A Other Terms and Penalties 6.s	<p>Vendor shall ensure that faults and failures intimated by the Bank as above are set right within 4 hours of being informed of the same. In any case the Equipment should be made workable and available not later than the next working day of the Bank.</p> <table><tr><th>S/N</th><th>Resolution Time</th><th>Penalty</th></tr><tr><td>1</td><td>Within four hours</td><td>Nil</td></tr><tr><td>2</td><td>Beyond four hours up to twelve hours</td><td>Rs. 50,000 per instance</td></tr><tr><td>3</td><td>Beyond twelve hours up to</td><td>Rs. 1,00,000 per instance</td></tr></table>	S/N	Resolution Time	Penalty	1	Within four hours	Nil	2	Beyond four hours up to twelve hours	Rs. 50,000 per instance	3	Beyond twelve hours up to	Rs. 1,00,000 per instance	<p>Vendor shall ensure that faults and failures intimated by the Bank as above are set right within 6 hours of being informed of the same. In any case the Equipment should be made workable and available not later than the next working day of the Bank.</p> <table><tr><th>S/N</th><th>Resolution Time</th><th>Penalty</th></tr><tr><td>1</td><td>Within Six hours</td><td>Nil</td></tr><tr><td>2</td><td>Beyond Six hours up to twelve hours</td><td>Rs. 50,000 per instance</td></tr><tr><td>3</td><td>Beyond twelve hours up to twenty four hours</td><td>Rs. 1,00,000 per instance</td></tr><tr><td>4</td><td>Beyond 24 hours</td><td>Bank may take suitable action.</td></tr></table>	S/N	Resolution Time	Penalty	1	Within Six hours	Nil	2	Beyond Six hours up to twelve hours	Rs. 50,000 per instance	3	Beyond twelve hours up to twenty four hours	Rs. 1,00,000 per instance	4	Beyond 24 hours	Bank may take suitable action.
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16	70	Hardware - Blade Enclosure	In case of multi-chassis aggregation (not more than 4 chassis in one set), each master enclosure must have redundant master modules to eliminate single point of failure. The multi-chassis setup should have total 40 x 25G uplink ports with 20 x 25G uplink ports for each master enclosure i.e. 20 x 25G uplink bandwidth must be maintained even after 50% of master interconnect failure for multi-chassis set.	In case of multi-chassis aggregation (not more than 48 Servers/4 chassis in one set), each master enclosure must have redundant master modules to eliminate single point of failure. The multi-chassis setup should have total 40 x 25G uplink ports with 20 x 25G uplink ports for each master enclosure i.e. 20 x 25G uplink bandwidth must be maintained even after 50% of master interconnect failure for multi-chassis set.						
17	67	GPU Rack Servers Type 2 (Category 6) 4. GPU	Each Node must be configured with Nvidia 8 x H200 141 GB GPUs (SXM) connected via Nvidia Nvlink with NV Switch or AMD Instinct 8 x MI300X 192 GB GPUs (OAM) connected via AMD Infinity Fabric. The total aggregate memory per node from the GPUs should be at least 1128 GB. Solution should come with all required licenses (including Nvidia AI enterprise / equivalent) for GPU slicing with VMware, Nvidia enterprise tech support, training, Inferencing etc.	Each Node must be configured with Nvidia 8 x H200 141 GB GPUs (SXM) connected via Nvidia Nvlink with NV Switch or AMD Instinct 8 x MI300X 192 GB GPUs (OAM) connected via AMD Infinity Fabric or 8x Gaudi 3 128 GB cards on OAM base board peer to peer networked. The total aggregate memory per node from the GPUs should be at least 1024 GB. Solution should come with all required licenses (including Nvidia/Intel/AMD AI enterprise / equivalent) for GPU slicing with VMware, enterprise tech support, training, Inferencing etc.						

For Category 6 - 8 GPU H200 Servers, please find below the scope of work from Rack and Power perspective:

Sr. No.	Features	Bank's Scope
1	Rack	<p>48U Rack:</p> <p>a. Rack Sizing: Height: 48U, Width: 800mm, Depth: 1400mm.</p> <p>b. The rack doors are with 75% perforation for optimal air flow.</p> <p>c. Cable Management: Cable management system (Horizontal / Vertical) shall be provided to ensure neat and efficient organization of power, data, and SAN cables, reducing potential cable clutter and improving airflow.</p>
2	Power Supply	<p>Each rack is equipped with three diverse power sources considering 6 power supply units (PSUs) per device or chassis.</p> <p>a. Rated power: A rack can handle the maximum load of 42 kW.</p> <p>b. Rack power distribution units (rPDU) specifications: 63A, rPDU, Outlet Level Monitoring, 43.4kW, 36 outlets Combination of C13/C19, 50/60Hz, 10ft / 3m power cord with 3P+N+E (IP67), Black Powder Coat. The rPDU will have digital ammeters to provide real-time power consumption data.</p> <p>c. Physical Configuration of rPDU: 66 inch / 1683mm, vertical</p> <p>d. Plug form: Input plug type – IEC60309 3P+N+E, 63A, 230/400V</p>

					<p>e. Receptacle / Socket type: Combination C13 / C19 (Quantity:36)</p> <p>f. Maximum output per receptacle / socket: 16A</p> <p>g. Voltage per receptacle / socket: 230V</p>	
			Sr. No.	Features	Vendor Scope / Adherence	
			1	Color-Coding for Cables and Connectivity	<p>a. Primary, Secondary and Tertiary Power Cables: All three power cables should be clearly distinguishable by color (e.g., blue for primary, red for secondary and yellow for tertiary), minimizing confusion and simplifying maintenance.</p> <p>b. Primary and Secondary SAN Connectivity Cables: SAN connectivity cables should be color-coded to distinguish primary (e.g., blue) from secondary (e.g., green) connections, ensuring that correct cables are connected and preventing configuration errors.</p> <p>c. Primary and Secondary Network Connectivity Cables: Network cables should also be color-coded (e.g., blue for primary, yellow for secondary) for easy identification of connections, reducing the risk of network misconfigurations.</p>	
			2	Environmental conditions	<p>The rack is equipped with Rear Door Heat Exchangers (RDHx) cooling technology and device should work under below environmental conditions-</p> <p>a. Rack supply air temperature: 25 +/- 2 Deg Cel</p> <p>b. Relative humidity: 20 – 80%</p> <p>c. RDHx door is chosen to support air flow of 1105 CFM per device, air flow must be Front to Back</p> <p>d. RDHx door is chosen considering the Delta T across front and rear sides of the rack as 18 Deg Cel.</p>	

				e. RDHx door is chosen to support maximum 38,557 BTU/Hr per device or chassis.		
<p>All devices should connect through different color Power Cables to easily identify that the devices are connected to all three power sources.</p> <p>The bidder is responsible for providing a complete infrastructure solution. The bank will provide the racks, power, and cooling for the equipment. All other items, including servers, SFPs (transceivers), cables (end to end network cabling, SAN cabling with material and effort) etc. must be supplied, installed, and make ready for use by the bidder.</p> <p>Power requirement need to be submitted by the bidder in the format below for all required</p>						
Provide the details on a per rack basis (use multiple sheets for total required racks)						
S.No.	Number of three phase circuits for each rack (Maximum – 3 pair)	Rack Circuit in Amps (Maximum of 63A)	Device Input Power Connector Type (C13 / C19)	Total Weight of Devices in Kgs per rack	Total Device Rated Power (in Watts)	
Device Details mounted in Rack						
S. No	Devices in Rack	Device / Equipment (Weight in Kgs)	Device 'U' Size	Device Rated Power (in Watts)	BTU / hour	Number of racks to be grouped or any such dependencies / conditions

			<p>Note: The power supply and environmental conditions as mentioned above are applicable only for the H200 GPU servers. Other GPU servers, should function with 32A three-phase (2A+2B or as required) power and conventional perimeter PAC cooling.</p>							

Revised Indicative Price Bid

Sr. No.	Item	Quantity	Rate per item	Amount in Rs.	Proportion to Total Cost of A (in %age) #
I	Category 1 - Blade Servers-(48 Core)	1535			
II	Category 1 - Blade Servers-(48 Core) with 4x3.xx TB NVMe local disk	240			
III	Category 2 - Rack Servers (128 Core)	151			

IV	Category 3 - Rack Servers (192 Core)	50			
V	Category 4 - Rack Servers (48 Core)	359			
VI	Category 5 – Rack Servers for Type 1 GPU (128 Core) (Without any GPU)	28			
VII	Category 6 – Rack servers for Type 2 GPU (128 Core) (With 8 Nvidia H200 141 GB GPU)	32			
VIII	Category 6 – Rack servers for Type 2 GPU (128 Core) (With AMD Instinct 8 x MI300X 192 GB GPUs with all required licenses)	32			
IX	Category 6 – Rack servers for Type 2 GPU (128 Core) (With Intel Gaudi 3, 8 x 128 GB GPUs with all required licenses)	32			
X	Nvidia H100 (94 GB)	56			
XI	Nvidia H200	56			
XII	Nvidia L40S (48 GB)	56			
XIII	NV Switch/Infinity Fabric switch/Ethernet switch for Category 6 Hardware	16			
XIV	AMD Instinct™ MI300X	56			
XV	Nvidia AI Enterprise License for 7 years	312			

1	Sub-Total (I to XV) (Including warranty for first five years)				
2	Comprehensive annual maintenance for Products mentioned above (from sr. no I to XIV) for two years, after the end of comprehensive warranty. (This cost should be between 8 to 12 % p.a. of the Product cost.)		AMC percentage to be mentioned		
* Total Cost of Ownership (1+2) = 'A'					

The 'Proportion to Total Cost' percentage mentioned here will have to be maintained in the final price quote also by the successful Bidder. The percentage should be mentioned in two decimal places. Variation in the final price should not exceed +/- 5%. See illustration at the end.

* This will be the Total Cost of Ownership (TCO)/Total Project Cost and should be quoted in the reverse auction.