Additional Terms and Conditions for Servers for ASC:

GENERAL TERMS AND CONDITIONS:

Bidders are advised to read all the clauses mentioned in the tender carefully. Submitting your solution implies that you agree to act as per the terms and conditions mentioned in the tender.

1. The bidder shall bear all the costs during the preparation and submission of the proposal, site visit, proposed equipment production site visit.
2. The bidders may be requested to come to IIT Bombay and present the solutions proposed in their technical bids.
3. No new information will be accepted from the bidder after the submission of the bids. However, IIT Bombay may ask for clarifications. IIT Bombay reserves the right to visit the manufacturing facility to verify the claim mentioned in the submitted bid. The bidder should respond to such a clarification request within the specified time.
4. The bidder has to supply a complete solution as per the items mentioned in the technical specification. On failing to do the same, IIT Bombay may invalidate the bid and disqualify the bidder.
5. The quoted product must be the most recent or currently supported models, and that they incorporate all recent improvements in design and materials. On failing to do the same, IIT Bombay may invalidate the bid and disqualify the bidder.
6. Due to a stringent deadline for incurring the expenditure, IIT Bombay has the right to **cancel the PO or charge the penalty** if the delivery, installation, and acceptance testing are not completed within the stipulated timeline. Specifically
    a. Delivery should be within **sixteen weeks** of issuing of PO.
    b. Installation, commissioning, and acceptance testing should complete within **two weeks of the delivery**.
    c. The payment term will be 60% on delivery and 40% on completion of scope of work defined below in this tender.
7. The purchase committee will make the final decision on the quantity of purchase after evaluating the proposals. The actual quantity purchased could be lower or higher upto 20% of indicated quantity.
8. At the time of installation, if it is found that some minor additional hardware or software items are required to meet the operational requirement of the configuration but not included in the OEM's original list of deliverables, the OEM shall supply such items to ensure the completeness of the configuration at no extra cost.
9. Bidders should submit only the necessary documentation related to this tender with a proper index highlighting the required technical specs in the product documentation that matches the tender specs or requested by the purchaser with page numbers. Failure to do the same will invalidate the bid and result in disqualification.
10. Bidder is not allowed to outsource any work mentioned in the "scope of work" for this tender to a third party.

11. Along with the technical bid, the bidder has to submit the compliance sheet as per the given format in Annexure-VII, documents checklist as per the given format in Annexure-VI, and complete bill of material (BoM). Failure to do the same will invalidate the bid and result in disqualification.
12. Along with the technical bid, the OEM has to submit Processor MAF (Manufacture Authorization Form) for the CPU through the bidder as per the given format in Annexure-V. Failure to do the same will invalidate the bid and result in disqualification.
13. The bidder has to give an undertaking of acceptance of all terms & conditions along with the technical bid on the company's letterhead as per the format given in Annexure-III. Failure to do the same will invalidate the bid and result in disqualification.
14. The bidder has to give an undertaking of authenticity along with the technical bid on the company's letterhead as per the format mentioned in Annexure-I. Failure to do the same will invalidate the bid and result in disqualification.
15. IIT Bombay reserves the right to accept or reject, in full or in part, any or all the offers if a) seller fails to comply with any material term of the contract; b) seller fails to deliver the material(s) or any part thereof within the stipulated delivery period and /or fails to replace/ rectify any rejected or defective material(s) promptly; c) seller becomes bankrupt or goes into liquidation or the seller makes a general assignment for the benefit of the creditors or a receiver is appointed for any substantial property owned by the seller; d) seller has misrepresented to buyer.
16. IIT Bombay does not bind itself to accept the lowest bid or any other bid and reserves the right to reject all or any bid or cancel the Tender without giving any reason whatsoever.
17. IIT Bombay also reserves the right to re-issue the tender without any explanation. The bidders will not have any right to object to such re-issue of tender.
18. IIT Bombay reserves the right to terminate the order/tender/PO if the bidder/OEM violates any of the terms and conditions of the tender.

BIDDER ELIGIBILITY CRITERIA:

S. No	Qualifying Criteria	Mandatory Document proof to be furnished
1	The bidder should be an Indian Company registered under the Companies Act / Partnership / LLP at least from the last five years. in a similar line of business, i.e., Installation, configuration, and commissioning of Enterprise series IT equipment.	Copy of the Partnership deed/Bye Law/Certificate of Incorporation issued by Registrar of Companies and Memorandum & Articles of Association and full address of the registered office.
	In case the Bidding Company is the result of a merger/acquisition, at least one of the merging companies should have been in operation for at least three years as on the date of submission of the bid.	

2	The bidder should have supplied at least 1 single order of more than 3 servers from a reputed OEM like HPE, DELL, IBM, Lenovo, CISCO, etc., to State/Central Government/PSUs or any listed corporate company.	Purchase order copies along with satisfactory work completion certificate/ Final Acceptance certificate issued by Client. Relevant Purchase Orders received can be attached.
3	The bidder should have at least two qualified and experienced Server Engineers/professionals on its payroll with a minimum experience of 5 years in handling servers from reputed brands.	Bio-data of the personnel proposed to be deployed for the project along with copies of the biodata, valid company ID, and salary sleep.
4	Bidder has to be an OEM or partner authorized by OEM for this tender.	Bidders should furnish a letter of authorization (MAF) from OEM for this tender as per the format given in Annexure - IV.
5	The Bidder should have an average annual turnover of ₹75 Lakhs and should be a positive net worth company for the last three financial years.	The Audited Financial Statements (Profit and loss statement, Balance sheet) for the last three years and CA certificate should be furnished/ uploaded. Solvency certificate for the value of ₹75 Lakhs issued by Scheduled Banks to be furnished.
6	The bidder should be an ISO 9001 certified company at least for the last three years.	The ISO certificate should be enclosed.
7	Bidders should have an office/branch in the MMR region.	Any government-approved proof should be provided.
8	The bidder is not blacklisted by any department of IIT Bombay, or by any other IIT, or by any state or central government body or organization, or by an autonomous body governed by state or central government, or in Government E-Marketing portal (GeM) in the past 3 years.	Self-declaration should be given on companies letterhead as per the format provided in the Annexure-II
9	The bidder can only go with a single OEM.	-NA-

OEM QUALIFICATION CRITERIA:

S. No	Qualifying Criteria	Mandatory Document proof to be furnished
1.	The OEM should be in the Gartner leader's magic quadrant for enterprise servers, at least for the last three years. OR The OEM should be in the top of 3 IDC Worldwide Quarterly Server Tracker (mainline servers) for last 4 consecutive Quarters from India region.	URLs of OEM and Gartner website should be provided or The OEM should submit a self-declaration with all the details mentioned on his letterhead.
2.	The OEM of quoted products should have its own corporate office or spare parts warehouse and service centre or RMA depot in the MMR region with fully qualified engineers.	Should submit any government authorized document which will prove this or should provide the OEM website URLs where this information is published or The OEM should submit a self-declaration with all the details mentioned on his letterhead.
3.	The OEM should be well equipped and located to honor 4 hours of response time in case of failures.	The OEM should submit a self-declaration with all the details mentioned on his letterhead.
4.	The OEM should be well established at least for last 10+ years in enterprise servers and should have a global footprint across a minimum of 5 continents.	Should submit any government authorized document which will prove the establishment of OEM/Brand and or copy of PO needs to be attached.
5.	The OEM should have a direct presence in India at least for last 10 years.	Should submit any government authorized document which will prove the establishment of OEM/Brand and or copy of PO needs to be attached.
6.	The OEM (India part) should have at least 8 Crores average annual turnover from the last 3 consecutive years.	The Audited Financial Statements (Profit and loss statement, Balance sheet) for the last three years and CA certificate should be furnished/ uploaded. OR a duly signed and stamped self-declaration on the company's letterhead.
7.	The OEM should have their own 24x7 technical support center in India and the technical support resources should be on direct payrolls with the OEM.	Should submit any government authorized document which will prove this or should provide the OEM website URLs where this information is published or The OEM should submit a self-declaration with all the details mentioned on his letterhead.

8.	The OEM should not be from a country that shares a land border with India.	-NA-
9.	The OEM should not be blacklisted by any department of IIT Bombay, or by any other IIT, or by any state or central government body or organization, or by an autonomous body governed by state or central government or Government E-Market portal (GeM) during the past 5 years.	Self-declaration should be given on companies letterhead as per the format provided in the Annexure-II
10.	The OEM can only bid through a maximum of 3 bidder/channel partners. In case, more than 3 bidders bid the solution from same OEM, IIT Bombay reserves the right to cancel the bids from the bidders/OEM	-NA-

TENDER EVALUATION:

The competent authority will evaluate all the proposals to determine whether these are complete in all respects as specified in the tender document. Evaluation of the proposal shall be done through a Two Bid System, as explained in the Notice Inviting Tenders.

1. Technical Bid evaluation:

A. Institute shall evaluate the technical bid to determine whether these are meeting the essential eligibility criteria, whether the bidder has submitted the EMD, whether any computational errors have been made, whether all the documents have been properly signed & stamped, whether all the documents as mentioned / or required to be submitted with technical bid are submitted and whether a bid is complete and generally is in order. There will not be any further technical evaluation in case of an incomplete bid and the bidder will be disqualified.

B. After evaluating the performance parameters offered, support structures, technical evaluation of the proposed server, and references, the competent authority will shortlist a group of bidders. The disqualifications will be informed to the concerned bidders. Subsequently, the shortlisted bidders will be required to participate in the commercial bidding detailed below.

2. **Financial Bid evaluation**

Bidders should quote a single figure of the final landed cost in INR.

The quote should be inclusive of all the taxes. The successful bidder will submit the item wise bifurcation of a single figure quoted and an item wise cost of a single server within 24 hours.

IIT Bombay reserves the right to further negotiate with the L1 bidder.

EVALUATION MATRIX:

In Annexure-VII, a set of attributes pertaining to the equipment have been given in the form of a compliance sheet. The purchase committee at IIT Bombay will check the quoted product is matching with the tender specifications. The evaluation will be done based on the documentation, details, and remarks given by the bidder and from the OEM website. The bidder/OEM will be disqualified if the quoted product is not complying with any of the tender specifications.

SCOPE OF WORK:

1. The selected Bidder has to supply the listed items within the stipulated time.

2. The selected Bidder has to deploy, install, configure and test the servers as per specification mentioned in the tender at Application Software Centre's Data Centre in accordance with the technical team of Application Software Centre IITB. The scope of the work at this phase would include but not restricted to the following:
    A. Site Inspection and Bill of Material Verification.
    B. Rack Mounting and Stacking of the Servers.
    C. Structured cabling of OFC, CAT6a/CAT7 and power and any other required

cabling and enclosing via flexible pipes wherever necessary with design approval from Technical staff assigned by Application Software Centre IIT Bombay.

D. Labelling for each and every cable, switch, server, and network diagram and documentation.
E. Servers Power on Self/Burn-In/Stress Test activity using HPL(High-Performance LINPACK), Disk IO testing using flexible input/output, rados and network IO using Netstress and IPerf –Minimum 48 Hours
F. Replacement of hardware if any fault is observed.
G. Licence installation.
H. Firmware upgradation.
I. Management IP and user configuration.
J. Installation of Linux operating system, drivers of all the peripherals, OS hardening as per the details and steps given by technical team of Application Software Centre IITB.
K. User acceptance Test and Sign off.

3. The Bidder has to ensure that the proposed equipment/components must not be declared “End of Support" in the next 7 years from the date of purchase. In case the supplied equipment is declared End of Support during the contract period of 7 years, the bidder/OEM has to replace the equipment having equivalent or higher configurations without any additional cost to the purchaser.

4. The Bidder should have a back-to-back arrangement with the OEM so that the purchaser will be able to log a call with the OEM directly for the contract period of 84 months.

5. Single Point of Contact: The selected Bidder shall appoint a single point of contact, with whom IIT Bombay will deal with any activity pertaining to the requirements of this Tender. The Bidder has to award all the necessary authority to this person at its own expense.

WARRANTY & SLA:

1. Each and every component of the supplied equipment, security keys, accessories, and licences should have an on-site comprehensive 24x7x365 days warranty for 60 months and beyond that an AMC of 24 months with 4 hours of response time and would be in the name of IIT Bombay. No parts, accessories, licences of the systems should be excluded from such warranty.
2. The said warranty will begin from the date of acceptance and sign-off from the technical team of IIT Bombay.
3. The bidder should also provide within the bifurcation document requested in Stage-2, the cost of annual maintenance contract (AMC) which starts at the end of the warranty period with back-to-back, onsite support from the OEM. The price of the AMC will be valid for 24 months after the end of the warranty period. The payment of the AMC will be released on a half-yearly basis based on the performance, and if there is any penalty, it will be deducted from the payment of the next quarter.

4. The bidder will be fully responsible for getting support from OEM in respect of each and every Hardware part, Software, Licences, and technical support for the equipment mentioned in this tender. In case the bidder fails to provide the support, OEM has to

provide technical support for the period mentioned in the contract. Bidder has to attach a confirmation letter from the OEM.

5. The said warranty and the AMC should not be considered violated if the IIT Bombay buys any other compatible supplemental hardware from a third party and installs it in the machines with an intimation to the awarded Bidder/OEM.
6. Mean time between failures (MTBF): If during the warranty period, any server or its components fails more than three occasions that caused downtime (below 99% uptime) in a period of less than three months, it shall be replaced by equivalent or better configured robust new server by the Bidder/OEM at no cost to the IIT Bombay.
7. For any delay in delivery of replacement of faulty parts during the inspection, commissioning of the systems, or for acceptance tests/checks, the IIT Bombay reserves the right to charge a penalty.
8. The Bidder will depute an experienced engineer as and when required to visit the site and assist the staff during the initial configuration and/or during the failure to ensure the system's proper functioning.
9. The Root Cause Analysis (RCA) faced for any issues related to the system should be provided by the OEM within 3 Business Days.
10. If any component supplied as a replacement by the Bidder/OEM is not compatible and proves to be useless to our solution, then the time passed during this replacement will be treated as system downtime.
11. The net uptime commitment of 99.6% monthly is a must on all the equipment, commencing from the date of the acceptance of the entire system (hardware/software). The uptime will be calculated as follows

    Uptime per server (%) = ((Total hours during the month - Sum of downtime hours during the month per servers) X 100) / Total hours during the month

    Total hours during the month = No. of days x24 hours

    Net Uptime = Sum of uptime of all the servers/ Number of servers.

12. Any hardware issues should be resolved/rectified within 24 hours. It is the responsibility of Bidder to coordinate with the OEM to arrange for a replacement if required within the stipulated time period.
13. Along with the technical bid, the OEM should submit a letter of commitment for **84 months (60 months of warranty and 24 months of AMC)** from the installation date, with respect to Hardware, Software, Firmware support, and uptime commitment. The bid will be rejected if they are not accompanied by the letter from the OEM.
14. In case of merger/sale of a business by the OEM, the above-said warranty, AMC and SLA will be applicable to the new OEM. If the new OEM does not honour the said warranty, AMC, and SLA, the IIT Bombay reserves the right to blacklist and take appropriate legal action against both the bidder and the OEM. The OEM has to accept this clause in the commitment letter. Failure of the same may result in disqualification of the bid.

PENALTY:

1. Delivery of all equipment should be within 8 weeks from the date of issuing the Purchase Order. In the event of any or all equipment(s) not being delivered, installed, tested, and commissioned within a period of 10 weeks from the date of Purchase Order, a penalty of one percent of the total cost of the solution per week will be charged to the bidder. This amount of penalty so calculated shall be deducted at the time of making final payment after successful installation and commissioning of hardware.

2. A penalty during the warranty period and AMC period:

Uptime Percentage	**Penalty Details**
During the warranty period	
Net Uptime is more than 99.6%	No Penalty
Net Uptime lesser than 99.6% but more than 99%	3% of the product cost
Net Uptime lesser than 99%	Penalty at an incremental rate of 2% (in addition to a base of 3%) of the product cost for every 0.5%lower than the stipulated uptime
During the AMC period	
Net Uptime is more than 99.6%	No Penalty
Net Uptime lesser than 99.6% but more than 99%	10% of the monthly product AMC cost
Net Uptime lesser than 99%	20% of the monthly product AMC cost

3. The penalty is to ensure that the OEM and vendor are putting their best efforts to honour SLAs committed. There will not be any upper limit on the penalty. If there is any penalty above the PBG, the bidder has to pay the penalty on demand raised by IIT Bombay. In case of failure to pay the penalty, IIT Bombay reserves the right to take legal action and blacklist the bidder/OEM.
4. The IIT Bombay reserves the right to publish the information about the unsatisfactory service by the bidder/OEM and action taken by the institute on their website and in the national newspaper (s).

Annexure – I **Format for Undertaking of Authenticity**
(To be given on company's letterhead)

Date:

To,
The Head
Application Software Centre,
IIT Bombay,
Powai Mumbai – 400076.

Sub: Undertaking of Authenticity for Hardware and/or Software Supplies Tender Reference No.: _____

Dear Sir,

With reference to the equipment being quoted to you, vide our Quotation No:_____dated_____, we hereby confirm that all the components, parts, assembly, software, etc. used in the equipment to be supplied shall be genuine, new components/parts/assembly/software and of the most recent or current supported models, and that they incorporate all recent improvements in design and materials, only from respective OEMs of the products and that no refurbished / duplicate / second-hand components
/parts/assembly/software shall be supplied or shall be used. We also undertake to produce a certificate from the Original Equipment Manufacturers (if required by you) to support the above statement at the time of delivery/installation.

2. We also confirm that in respect of licensed operating systems and other software utilities to be supplied, the same will be procured from authorised sources and provided with an Authorized License Certificate

3. In case of default and if the purchaser finds that the above conditions are not complied with, we agree to take back the equipment supplied and return the money paid by you, in full within seven days of intimation of the same by the purchaser, without demur or any reference to a third party and without prejudice to any remedies the purchaser may deem fit.

4. In case of default and if we are unable to comply with the above, at the time of delivery or during installation, for the IT Hardware / Software already billed, we agree to take back the equipment without demur if already supplied and return the money if any paid to us by you in this regard.

5. We also take full responsibility for both parts & Service SLA as per the content even if there is any defect by our authorized Service Centre / Reseller / SI.

Dated this ..... day of 202…

(Signature) (Name) (In the capacity of)

Duly authorised to sign Bid for and on behalf of _____

Annexure-II **Self declaration of blacklisting**

(To be given on company's letterhead)

Date:

To,
Head
Application Software Centre,
IIT Bombay,
Powai Mumbai – 76.

Sub: Declaration of Non-Blacklisting.
Tender Reference No.: _____

Dear Sir,

With reference to the equipment being quoted to you vide our Quotation No:_____dated_____, we hereby declare that neither we nor our Start-up or a parent, subsidiary, or associate Company under direct or indirect common parent is/are presently not placed on any Blacklist or Holiday list by any department of IIT Bombay, or by any other IIT, or by any state or central government body or organization, or by any PSU's, or by an autonomous body governed by state or central government or in Government E- Marketing Portal (GeM) for any kind of fraudulent practice(s)/activity(s) in last three years.

It is understood that, If this declaration is found to be incorrect, then without prejudice to any other action that may be taken, my/ our security may be forfeited in full, and the tender, if any to the extent accepted, may be cancelled.

Dated this ..... day of 202…

(Signature) (Name) (In the capacity of)

Duly authorised to sign Bid for and on behalf of _____

Annexure – III **TENDER / CONDITIONS ACCEPTANCE LETTER**

(To be given on company's letterhead)

Date:

To,
Head
Application Software Centre,
IIT Bombay,
Powai Mumbai – 76.

Sub: Acceptance of Terms & Conditions of Tender.
Tender Reference No.: _____

Dear Sir,

1. I/We have downloaded/obtained the tender document(s) for the above-mentioned 'Tender/Work.'
2. I/We hereby certify that I/We have read the entire terms and conditions of the tender documents (including all documents like annexure), schedule(s), etc.,) and I/We shall abide by the terms/conditions/clauses contained therein.
3. The corrigendum(s) issued from time to time by your department/organization has also been taken into consideration while submitting this acceptance letter.
4. I/We hereby unconditionally accept the tender conditions of the above-mentioned tender document(s)/corrigendum(s) in totality/entirely.
5. In case any provisions of this tender are found violated, your department/ organization shall be at liberty to reject this tender/bid, including the forfeiture of the full said earnest money deposit absolutely, and we shall not have any claim/ right against deptt in satisfaction of this condition.

Dated this ..... day of 202…

(Signature) (Name) (In the capacity of)

Duly authorised to sign Bid for and on behalf of _____

Annexure – IV **Manufacturer's Authorization Form**

(To be given on OEM's letterhead)

Date:

To,
Head
Application Software Centre,
IIT Bombay,
Powai Mumbai – 76.

Sub: Authorization for participation in the Tender. Tender Reference No.: _____

Dear Sir,

We, who are established and reputable manufacturers / producers of _____having factories / development facilities at _____ (address of factory / facility) do hereby authorise M/s_____(Name and address of Agent) to submit a Bid, and sign the contract with you against the above Bid Invitation.

2. We hereby extend our full warranty/support for the above firm's Solution, Products, and services against this Bid Invitation for the mentioned period.

3. We duly authorise the said firm to act on our behalf in fulfilling all installations, Technical support, and maintenance obligations required.

Dated this ..... day of 202…

(Signature) (Name) (In the capacity of)

Duly authorised to sign Bid for and on behalf of _____

Annexure – V Manufacturer's Authorization Form for Processor

(To be given on Processor OEM's letterhead)

Date:

To whom it may concern

Sub: Authorization for participation in the Tender.

Tender Reference No.: _____

Dear Sir,

This is to certify that we, _____ (AMD/Intel) authorize M/s _____ (Name and address of server OEM) to use _____ (Model number of the processor) against the above said tender inquiry and also do confirm that, they are manufactured and supplied by us.

We duly certify that, the said OEM will have full authority to install, maintain and provide technical support for the above mentioned processor.

Dated this ..... day of 202…

(Signature) (Name) (In the capacity of)

Duly authorized to sign Bid for and on behalf of _____

Annexure-VI **Format for the documents checklist**

All the bidders are requested to mention the details/any deviations with respect to the requested documents along with the exact reference page number from the documentation in the compliance sheet format given below.

Sr. No.	Requested Documents	Attached/Remark
1.	**MAF (Manufacturers authorization Form) (Server OEM)**	
2.	**Processor MAF (Manufacturers authorization Form) (Processor OEM)**	
3.	**Compliance Sheet**	
4.	**BOM (Bill of Material)**	
5.	**The undertaking of authenticity**	
6.	**Self-declaration of blacklisting**	
7.	**Acceptance of Terms and Conditions**	
8.	**Letter of commitment**	
9.	**Technical Documents of quoted server, disk, NIC cards, SMPS, etc. (Datasheets/Manuals/whitepapers, etc)**	
10.	**Documents against the bidder's eligibility criteria (Turnover, copies of PO, Engineer's Bio-data, MMR region office address, etc.)**	
11.	**Documents against the OEM eligibility criteria (Details/URLs for Gartner presence, services centers, years of presence in India and globally, copies of PO, Turnover, etc.)**	

Annexure-VII **Format for the compliance sheet**

All the bidders are requested to mention the details/any deviations with respect to the specifications along with the exact reference page number from the documentation in the compliance sheet format given below.

Sr. No.	Specifications	Bidder Compliance/Remark
1.	**Processor:** AMD Epyc/Intel XEON latest generation CPU With at least 48 Cores, 256M L3 Cache, 2.3 GHz base clock, PCIe 4.0x128 per CPU.	
2.	**Motherboard:** 2 socket server board (compatible with item 1) with the following characteristics: ● Total 32 DIMM slots. ● Memory is upgradable up to 2TB per CPU with LRDIMM. ● Hot-swap support for SATA, SAS, SSD, and NVMe. ● Minimum of 2 numbers of internal USB 3.0/ 3.1 ports. ● At least Primary and Secondary risers installed. ● Minimum 8 PCI-Express 4.0 slots, out of which at least two x16 PCIe slots and at least two x8 PCIe slots. ● Must have an integrated server management system. ● Support upto 4 single wide GPUs	
3.	**Memory:** ● Total 512GB Memory: 64GB/128GB Quad Rank DDR4-3200 ECC compatible LRDIMM Memory and should be evenly distributed. ● Memory blanks for remaining slots.	
4.	**Disks:** 1.92TB Enterprise series SAS 12Gbps SSD with DWPD >3 (Greater than or equal to 3).	
5.	**M.2 Storage for OS:** 400GB usable 6Gbps M.2 in RAID 1 configuration or equivalent.	

6.	**Raid Support:** On-board raid support for raid 0, 1, 10, 5, 6, 50, 60 from day one with 12Gbps port speed and 8GB cache with support for Secure encryption/data at rest Encryption. Also, the controller must support Mixed Mode which combines RAID and HBA mode operation simultaneously and support 6G SATA, 6G/12G SAS, Gen 3/Gen4 NVMe. The disk must be directly visible to OS if not included in RAID. RAID controller should support standard drivers available in latest versions of Debian, Centos/RHEL, Proxmox.	
7.	**Network Cards:** Dual Port 25G (capable of auto-negotiation to 10G) Ethernet Adapter with at least the following features and either from Intel, Mellanox or Xillinx only. ● must be a Converged Network Adapter. ● Should support RDMA. ● Should meet the IEEE 802.3 standard. ● 802.1q VLAN tagging support. ● The adapter should deliver 50 Gbps bi-directional Ethernet transfer rate per port. ● The adapter should support IPv6, Jumbo frame, PXE, WOL. ● The adapter should support Single-Root I/O Virtualization (SR-IOV). ● The adapter should support standard drivers that come in Debian, Centos/RHEL, Proxmox operating system.	
8.	**SFP:** Compatible SFP28 SR bi-directional transceiver module with the item mentioned in point no. 7 with the following feature and from the same OEM. ● Connectivity with standard, multi-mode LC connectors. ● Compatible in environments with Arista, Cisco, Dell, Intel, Juniper, Mellanox, Extreme, and more. ● Compatible with existing SFP28 SR, and bi-directional transceivers already in your configuration. ● Support industrial temperatures (-40C to +85C).	

9.	**Front Panel IO:** ● USB Ports (at least 1 should be of 3.0/3.1) ● VGA / HDMI ● At least 16 SFF Drive bays from day 1	
10.	**Back Panel IO:** ● Onboard/FlexLOM based 10G Base-T Ethernet ports. ● Dedicated Management port. ● USB ports 2.0 and 3.0/3.1 ● VGA / HDMI ● Serial port	
11.	**Server Management:** ● The server Management system must be based on either of **ILO5, IDRAC 9, XCC, IMC** system strictly. ● The server should have a dedicated 1Gbps server management port. ● Remote management should support browser-based remote consoles, virtual power, and virtual media based on HTML5 and java free systems. ● Browsers like Mozilla Firefox and Google Chrome must be supported for the full functionality of the on-board management system. ● The management system should have a dashboard view to view the manages resources to assess the overall health of all the servers. ● The remote console can be shared among at least 3 users simultaneously during operating with a server based on the role assigned to them (role based access). ● Users must be able to install Operating systems remotely using the on-board management system by mounting ISO/USB from their own machine. (perpetual license must be included, if required) ● The on-board management should support Zero Touch Provisioning (ZTP) of a bare metal server. ● The on-board management should support group power control, group virtual media, group firmware upgrade without installation of any software or agent, and via a dedicated management port mentioned above. ● Policy template for deployment of single policy to multiple Servers simultaneously. ● Server utilization statistics collection (including firmware updates and diagnostic tools) ● Solution should be open and programmable providing Rest API, SDK for programming languages like Python, power shell scripts etc.	

	• Should have customizable dashboard to show overall faults/health/inventory for all managed infrastructure the solution should provide option to create unique dashboards for individual users. The user should be flexibility to select name for dashboards and widgets (viz. health, utilization etc) • Must support monitoring using SNMP v2 and v3. • The possibility to integrate with LDAP/SAML2/Oauth2 based authentication/authorization will be an added advantage in technical evaluation. • The on-board management system should be capable of sending email alerts. The alert should also include SSD wear. • The on-board management should support NTP synchronization. • Offered servers shall have a provision for cloud enabled monitoring and analytics engine for proactive management from the same OEM and with features like a. Providing Firmware upgrade and patch upgrade recommendations proactively, b. Providing power and support entitlement status, c. Recommendations to eliminate performance bottlenecks and critical events, etc.	
12.	**Power Supply:** • RPS (redundant power supply) & hot-swappable SMPS with minimum of 94% efficiency should be able to supply power for a maximum capacity of RAM, HDD, etc. • Power Cord, IEC Male to IEC Female connectors 230V C13 to C14 connectors with 3 meters in length.	
13.	**Server Chassis:** • 2U Rack-mountable chassis. • Hot-swappable Redundant High- Performance fans • Compatible easy to install Rail Kit with locking system. • Cable Management Arm compatible with rail kit. • At least 24 SFF drives should be supported in server chassis in case of 2 single wide GPUs configuration.	
14.	**Server Security:** • Secure Boot (Firmware and Bios Level Security) • Provision to lock the system on breach • Hardware root of trust/Dual Root of Trust • Server should provide server intrusion detection. • Provision for Cryptographic firmware updates.	

	• Server should be RoHS complaint. • Capability to stop execution of Application/Hypervisor/ Operating System on predefined security breach • Secure/Automatic BIOS recovery • System should support FIPS/Common criteria compliance. • Network Card secure firmware boot in case of any security breach system should provide the lock down feature • For firmware security, system should support remote management creating a fingerprint in the silicon, preventing servers from booting up unless the firmware matches the fingerprint. This feature should be immutable. • Should maintain repository for firmware and drivers recipes to aid rollback or patching of compromised firmware. Should also store Factory Recovery recipe preloaded to rollback to factory tested secured firmware	
15.	**Temperature Range:** The server should work efficiently in the temperature range of 10ºC to 35ºC.	