

**Supply, Installation, Configuration & Commissioning of
Host Server for EMS Hospital**



EMS MEMORIAL CO-OPERATIVE HOSPITAL & RESEARCH CENTRE PERINTHALMANNA
Technical Specification of Hardware

QUOTATION NOTICE FOR HOST SERVERS, STORAGES, RHEL SUBSCRIPTIONS, SAN SWITCHES AND RACK

EMCH/QTN/GEN/46/2025

08.12.2025

Sealed quotations are hereby invited from established manufacturers / authorized suppliers for Supply, Installation, Configuration & Commissioning of Host Servers and related equipment in the EMS Hospital. Interested and qualified parties can submit their quotations in accordance with the stipulated guidelines.

The detailed technical specifications for the hardware are available in website.
emshospital.org.in/about/tender

Quotation should be in two sealed covers for each item

The technical bid, super scribed "Technical bid," must incorporate the comprehensive technical specifications for each hardware and a detailed list of clients.

Second cover super scribed "Commercial bid " with name of item should include commercial terms such as price, Warranty terms, tax if any ,AMC,CMC Details for next 5 years after warranty, cost of spare parts.

Technical quotation will be scrutinized by a technical committee

Technically qualified quotations will be only being considered for the opening of Commercial quotations. L1, L2 and L3 will be considered for the further negotiations.

Sealed quotations addressed to The General Manager, EMS Memorial Co-Operative Hospital, Perinthalmanna, must be submitted to the Administrative Office of the hospital no later than 3 PM on 22.12.2025.




General Manager

1. INTRODUCTION

- EMS Hospital intends to procure a high-performance Host Server to support critical healthcare applications, HIS/EMR/PACS, database workloads, and virtualization environments. This tender outline the technical specifications, supply requirements, installation responsibilities, and contractual obligations of the selected vendor.

2. OBJECTIVE

To select a qualified and experienced bidder for the supply, installation, testing, configuration, commissioning, and warranty support of a Host Server as per the specifications defined in this document.

3. SCOPE OF WORK – VENDOR RESPONSIBILITIES

3.1 Supply & Delivery

- a. Supply hardware as per specifications
- b. Ensure original, brand-new products
- c. Deliver to EMS Hospital premises within the tendered delivery timeline

3.2 Installation & Commissioning

- a. Physical installation and rack mounting all the hardware as per SPEC
- b. Power and network connectivity setup
- c. RAID configuration
- d. BIOS configuration and firmware upgrade
- e. Assigning IP and setting up remote management

3.3 Software Configuration

- a. Installation of OS (Linux)
- b. Basic system hardening and driver installation
- c. KVM VM provisioning as per the EMS requirement

3.4 Testing & Validation

- a. Performance and stress testing
- b. RAID health verification

- c. Network throughput testing
- d. PSU redundancy testing

3.5 Documentation

Vendor shall provide:

- a. Installation Report
- b. Configuration Documentation
- c. Warranty Certificates
- d. OEM Product Data Sheets
- e. Remote Management Access Details

3.6 Training

- a. Basic training to EMS Hospital IT staff on daily operations

4 DELIVERABLES

- a. Fully installed and operational Host Server
- b. All documentation, certificates, manuals, and warranty records
- c. Completion & Commissioning Report signed off by EMS Hospital

5 TERMS AND CONDITIONS

5.1 Eligibility Criteria

- a. Bidder must be an OEM or Authorized Partner/Distributor
- b. Bid Specific Valid authorization letter required from OEM
- c. Bidder must have at least 3 years experience in server supply/installation Minimum 3 similar work orders completed in the last 5 years, A copy of at least Single Purchase Order to the value of Rs.1Cr or above on Servers/Storage for any State / Central Government / Department / Organization / PSUs / Institutes Government funded.

5.2 Compliance Requirements

- a. All quoted items must strictly adhere to the technical specifications
- b. Any deviation must be clearly highlighted with supporting OEM documents
- c. Failure to disclose deviations may lead to bid rejection

5.3 Delivery Timeline

- a. The server must be delivered and installed within 6–8 weeks from PO date

- b. Delay without valid justification may attract penalty as per hospital norms

5.4 Payment Terms

- a. 30% Advance against MoU in Rs.500/- stamp paper.
- b. 40% after Delivery
- c. 20% after installation & commissioning
- d. 10% after final acceptance

5.5 Warranty Support

- a. 5 Years Onsite Support
- b. Replacement of any defective part at no additional cost
- c. Vendor must ensure service availability throughout warranty
- d. 5 Year Bidder Onsite Support with SLA for Supplied Hardware

5.6 Penalties

- a. Delay in delivery/installation may attract liquidated damages
- b. Penalty: 0.5% per week, maximum 5% of total order value

5.7 Acceptance Criteria

- a. Hardware meets all technical specifications
- b. Successful installation, testing, and commissioning
- c. Final sign-off by EMS Hospital authorized personnel

5.8 Subcontracting

- a. Subcontracting is not allowed without prior written approval

5.9 Governing Law

- a. The tender shall be governed by applicable laws under the jurisdiction of the state where EMS Hospital operates

6. EXCLUSIONS

- a. Third-party application/software installation
- b. Network infrastructure not directly related to server
- c. Data migration from existing infrastructure

7. FORCE MAJEURE

Events such as natural disasters, war, pandemics, or government restrictions may exempt both parties from penalty for non-performance.

8. BID SUBMISSION FORMAT

Technical Bid (Envelope 1)

- a. Company Profile
- b. PAN, GST Registration
- c. Bid Specific OEM Authorization Letter
- d. List of Past Projects
- e. Compliance Sheet (Annexure-II)
- f. Data sheet should be submitted for each item for the technical compliance.
- g. Detailed Bill of Materials for all the required components should be mentioned else, the bidder will be disqualified.
- h. Signed and sealed copy of tender document

Financial Bid (Envelope 2)

- Price Bid in prescribed format
- All-inclusive cost (taxes, installation, transport, etc.)

9. GENERAL TERMS & CONDITIONS

- a. The bidder must quote all items; partial quotes will not be accepted.
- b. The hospital reserves the right to accept or reject any bid without assigning reasons.
- c. All supplied hardware must be genuine and from authorized channels.
- d. Sub-contracting is not permitted without prior written approval.
- e. All disputes will be governed by local jurisdiction laws.
- f. Force Majeure conditions will be honoured if proven.

10. INSTRUCTIONS TO BIDDERS

10.1 Mode of Submission:

- a. Bids must be submitted in Two Bid System:
 - (a) Technical Bid
 - (b) Financial Bid
- b. Bids must be sealed and submitted to the Procurement Office, EMS Hospital.

10.2 Eligibility Criteria:

- a. OEM or Authorized Partner (Bid Specific Authorization letter mandatory)

- b. At least 5 years of experience in supplying & installing Servers
- c. Minimum 3 similar completed projects in last 5 years
- d. PAN, GST Certificate, Company Registration Certificate
- e. The Bidder should have positive net worth for last three audited Financial Years.
- f. Bidder should be an established IT hardware supplier and solution provider and should have been registered office in Kerala for Local Support.
- g. Server OEM should be ranked one of the top 2 server OEM's in the country as per the last Three quarters (2022 - 2025) of IDC x86 server market report of India. The copy of these report needs to be submitted in the technical bid

10.3 Bid Rejection Conditions:

- a. Late submission
- b. Incomplete documentation
- c. Deviations without proper OEM supporting documents
- d. Conditional or vague bids

10.4 Bid Validity:

- a. Bids must be valid for 90 days from date of submission.

INDEX – TECHNICAL SPECIFICATION DOCUMENT		
SL	DESCRIPTION	QTY(Nos)
1	Host Servers	5
2	SAN Storage – (60 TB Usable)	1
3	SAN Switch	2
4	SFP Modules	8
5	L3 Network Switch	2
6	Fiber Optic LC–LC OM4 Patch Cables	30
7	RHEL Operating System for Host Servers	5
8	RHEL Operating System for Guest Virtual Machines	11
9	42U Network Rack	1

1	HOST SERVER 1 — DETAILED SPECIFICATION (QTY: 1)	
CPU	Intel Xeon Silver Series (Latest Generation)	
	2 Processors	
	Total Physical Cores: 64 Cores (32 × 2 CPUs)	
	Base Frequency: 2.3 GHz or higher	
	Cache: 22 MB or higher per CPU	
	Architecture: 64-bit x86_64	
	Virtualization Support: Intel VT-x, VT-d	
Memory	256 GB DDR4/DDR5 ECC RDIMM	
	Speed: 3200 MHz or higher	
	Expandable up to 1 TB	
Storage	OS: 2 × 2TB SAS 12Gbps (RAID 1)	
	Data: 4 × 2TB SAS 12Gbps (RAID 5/6)	
RAID	Hardware RAID Controller, 12Gbps	
	RAID 0/1/5/6/10	
	2GB NV Cache with battery/capacitor backup	
Networking	2 × 10G SFP+	
	2 × 1G RJ45	
Fibre Channel	Dual Port 32Gb FC HBA	
Management	Dedicated 1Gb management port	
	iDRAC/iLO/IPMI with virtual KVM, remote media, firmware updates	
	Power & Form Factor	
Power & Form Factor	Redundant Platinum PSU	
	2U Rack Server	
Warranty	5 Years Onsite Warranty	

2	HOST SERVER 2 — DETAILED SPECIFICATION (QTY: 1)	
	Intel Xeon Silver Series (Latest Generation)	
	2 Processors	
	Total Physical Cores: 64 Cores (32 × 2 CPUs)	

CPU	Base Frequency: 2.3 GHz or higher
	Cache: 22 MB or higher per CPU
	Architecture: 64-bit x86_64
	Virtualization Support: Intel VT-x, VT-d
Memory	128 GB DDR4/DDR5 ECC RDIMM
	Speed: 3200 MHz or higher
	Expandable up to 1 TB
Storage	OS: 2 × 2TB SAS 12Gbps (RAID 1)
	Data: 4 × 2TB SAS 12Gbps (RAID 5/6)
RAID	Hardware RAID Controller, 12Gbps
	RAID 0/1/5/6/10
	2GB NV Cache with battery/capacitor backup
Networking	2 × 10G SFP+
	2 × 1G RJ45
Fibre Channel	Dual Port 32Gb FC HBA
Management	Dedicated 1Gb management port
	iDRAC/iLO/IPMI with virtual KVM, remote media, firmware updates
	Power & Form Factor
Power & Form Factor	Redundant Platinum PSU
	2U Rack Server
Warranty	5 Years Onsite Warranty

3	HOST SERVER 3 — DETAILED SPECIFICATION (QTY: 1)
CPU	Intel Xeon Silver Series (Latest Generation)
	2 Processors
	Total Physical Cores: 64 Cores (32 × 2 CPUs)
	Base Frequency: 2.3 GHz or higher
	Cache: 22 MB or higher per CPU
	Architecture: 64-bit x86_64
	Virtualization Support: Intel VT-x, VT-d
Memory	96 GB DDR4/DDR5 ECC RDIMM
	Speed: 3200 MHz or higher
	Expandable up to 1 TB
Storage	OS: 2 × 520GB SSD (RAID 1)
	Data: 3 × 1TB SAS 12Gbps (RAID 5/6)
RAID	Hardware RAID Controller, 12Gbps
	RAID 0/1/5/6/10
	2GB NV Cache with battery/capacitor backup
Networking	2 × 10G SFP+
	2 × 1G RJ45
Fibre Channel	Dual Port 32Gb FC HBA
Management	Dedicated 1Gb management port
	iDRAC/iLO/IPMI with virtual KVM, remote media, firmware updates
	Power & Form Factor
Power & Form Factor	Redundant Platinum PSU
	2U Rack Server

Warranty	5 Years Onsite Warranty
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4	HOST SERVER 4— DETAILED SPECIFICATION (QTY: 1)	
CPU	Intel Xeon Silver Series (Latest Generation)	
	2 Processors	
	Total Physical Cores: 64 Cores (32 × 2 CPUs)	
	Base Frequency: 2.3 GHz or higher	
	Cache: 22 MB or higher per CPU	
	Architecture: 64-bit x86_64	
	Virtualization Support: Intel VT-x, VT-d	
Memory	128 GB DDR4/DDR5 ECC RDIMM	
	Speed: 3200 MHz or higher	
	Expandable up to 1 TB	
Storage	OS: 2 × 2TB SAS 12Gbps (RAID 1)	
	Data: 4 × 2TB SAS 12Gbps (RAID 5/6)	
RAID	Hardware RAID Controller, 12Gbps	
	RAID 0/1/5/6/10	
	2GB NV Cache with battery/capacitor backup	
Networking	2 × 10G SFP+	
	2 × 1G RJ45	
Fibre Channel	Dual Port 32Gb FC HBA	
Management	Dedicated 1Gb management port	
	iDRAC/iLO/IPMI with virtual KVM, remote media, firmware updates	
	Power & Form Factor	
Power & Form Factor	Redundant Platinum PSU	
	2U Rack Server	
Warranty	5 Years Onsite Warranty	

5	HOST SERVER 5— DETAILED SPECIFICATION (QTY: 1)	
CPU	Intel Xeon Silver Series (Latest Generation)	
	2 Processors	
	Total Physical Cores: 64 Cores (32 × 2 CPUs)	
	Base Frequency: 2.3 GHz or higher	
	Cache: 22 MB or higher per CPU	
	Architecture: 64-bit x86_64	
	Virtualization Support: Intel VT-x, VT-d	
Memory	256 GB DDR4/DDR5 ECC RDIMM	
	Speed: 3200 MHz or higher	
	Expandable up to 1 TB	
Storage	OS: 2 × 2TB SAS 12Gbps (RAID 1)	
	Data: 5 × 2TB SAS 12Gbps (RAID 5/6)	
RAID	Hardware RAID Controller, 12Gbps	
	RAID 0/1/5/6/10	
	2GB NV Cache with battery/capacitor backup	
Networking	2 × 10G SFP+	

Networking	2 × 1G RJ45
Fibre Channel	Dual Port 32Gb FC HBA
Management	Dedicated 1Gb management port
	iDRAC/iLO/IPMI with virtual KVM, remote media, firmware updates
	Power & Form Factor
Power & Form Factor	Redundant Platinum PSU
	2U Rack Server
Warranty	5 Years Onsite Warranty

6	SAN STORAGE 60TB Usable Approx (QTY: 1)
Controller	Dual Active–Active Storage Controllers
	No Single Point of Failure
	Each Controller with Minimum 12 GB Cache
	Total Cache: 24 GB or Higher
Architecture	Enterprise Unified SAN Storage
Usable Capacity	Minimum 60 TB Usable After RAID
Disk Type	Supports SSD + SAS / NL-SAS
SSD Tier	10 TB After RAID
SSD RAID	RAID 5
SSD Usable Capacity	Approx. 9.6 TB
NL-SAS Tier	50 TB After RAID
NL-SAS RAID	RAID 6
NL-SAS Usable Capacity	50 TB
Total Usable Capacity	60TB
RAID Support	RAID 0 / 1 / 5 / 6 / 10
Front-End Ports	8 × 32Gb Fibre Channel Ports
Back-End Ports	2 × 12Gb SAS Ports
Multipathing	MPIO Supported
Thin Provisioning	Supported
Auto Tiering	Supported (SSD ↔ NL-SAS)
Snapshots	Supported
Cloning	Supported
Replication	Supported
LUN Support	1000+ LUNs
Host Compatibility	VMware ESXi 7/8
	Windows Server 2019/2022
	RHEL / Rocky / Ubuntu
Management	Web GUI Based Management
	CLI Management
	SNMP Monitoring
Scalability	Expandable with Disk Shelves
Power Supply	Redundant Hot-Swap Power Supplies
Cooling	Redundant Hot-Swap Fans
Form Factor	2U / 4U Rack Mountable
Security	Role-Based Access Control
Firmware	Non-Disruptive Firmware Upgrade

Certification	VMware VAAI & VASA Certified
Warranty	5 Years Comprehensive Onsite OEM Warranty

7	SAN SWITCH (QTY: 2)
Form Factor	1U Rack Mountable Fibre Channel Switch
Port Count	Minimum 24 × 32Gb Fibre Channel Ports
Port Status	All Ports Active from Day-1
Speed Support	32G / 16G / 8G Auto Negotiation
Switching Bandwidth	≥ 307.2 Gbps
Latency	Ultra-low latency for SAN traffic
Zoning	Port Based / WWN Based / Fabric Zoning
Trunking	ISL Trunking Supported
NPIV	NPIV Supported
Fabric Services	Principal Switch, Fabric Login
Management	Web GUI Based Management
	CLI Based Management
Monitoring	SNMP v1 / v2 / v3
Logging	Syslog Supported
Firmware Upgrade	Non-Disruptive (ISSU) Upgrade
Security	Role Based Access Control
Power Supply	Dual Redundant Hot-Swap PSUs
Cooling	Redundant Hot-Swap Fan Modules
Compatibility	Compatible with All Major SAN Storage
	Compatible with 32G / 16G / 8G HBAs
Mounting Kit	Complete Rack Mount Kit Included
Warranty	5 Years Comprehensive OEM Warranty
Support	24×7 OEM Technical Support

8	SFP Modules(QTY- 8)
Type	32Gb Fibre Channel SFP+
Wavelength	1310 nm
Connector Type	LC Duplex
Fiber Type	OM4 Multimode Fiber
Distance Support	Up to 100 meters
Speed Compatibility	Backward Compatible with 16G / 8G
Standard	MSA Compliant
Branding	OEM Branded / OEM Approved
Hot Pluggable	Supported
Power Consumption	Low Power
Operating Temperature	0°C to 70°C
Mounting	Plug-and-Play
Warranty	Minimum 1 Year (Preferably 5 Years)

9	Layer 3 Managed Network Switch(QTY 2)
Switch Type	Layer 3 Managed Network Switch

Form Factor	1U Rack Mountable
Port Count (Access Ports)	Minimum 24 × 1G RJ45 Ethernet Ports
Uplink Ports	Minimum 4 × 10G SFP+ Uplink Ports
Switching Capacity	≥ 128 Gbps
Forwarding Rate	≥ 95 Mpps
Stacking Support	Virtual Stacking / Physical Stacking Supported
Switching Mode	Store-and-Forward
Layer 2 Features	VLAN, Trunking (802.1Q), STP, RSTP, MSTP
Layer 3 Features	Static Routing, RIP, OSPF, VRRP
Multicast Support	IGMP Snooping, PIM
QoS	802.1p, DSCP, Traffic Shaping
Security	ACLs, Port Security, DHCP Snooping, IP Source Guard
Authentication	802.1X Port Based Authentication
Management	Web GUI, CLI
	SNMP v1 / v2 / v3
	Syslog, NTP
Remote Management	SSH, Telnet
IPv4 / IPv6 Support	Supported
Redundancy	Link Aggregation (LACP)
Power Supply	Dual Redundant Hot-Swap Power Supplies
Cooling	Hot-Swap Redundant Fan Modules
Power over Ethernet (PoE)	Not Required / As Per Requirement
Mounting Kit	Complete Rack Mount Kit Included
EMI / EMC Compliance	FCC, CE Certified
Operating Temperature	0°C to 45°C
Warranty	5 Years Comprehensive OEM Warranty
Support	24×7 OEM Technical Support

10	LC–LC Fiber Optic Patch Cord(30 nos)
Cable Type	LC–LC Fiber Optic Patch Cord
Fiber Type	Multimode OM4
Core Type	Duplex (2 Core)
Connector Type – End A	LC Connector
Connector Type – End B	LC Connector
Polish Type	UPC
Operating Wavelength	850 nm
Bandwidth	4700 MHz·km
Jacket Type	LSZH (Low Smoke Zero Halogen)
Jacket Color	Aqua
Cable Length	3 Meters / 5 Meters (As Required)
Insertion Loss	≤ 0.3 dB
Return Loss	≥ 35 dB
Bend Radius	As per OM4 Standard
Operating Temperature	-20°C to +70°C
Application	32G / 16G / 8G Fibre Channel
Usage	SAN Switch ↔ SAN Storage
	SAN Switch ↔ Server FC HBA

	Direct Server ↔ Storage (If Required)
Compatibility	Fully Compatible with 32G FC SFP Modules
Standard Compliance	IEEE 802.3, TIA/EIA
Branding	OEM Branded / OEM Approved
Packaging	Individually Packed
Warranty	Minimum 1 Year Warranty

11	Red Hat Enterprise Linux (RHEL) (QTY 5)
OS Type	Red Hat Enterprise Linux (RHEL)
Version	RHEL 9.x (Latest Stable)
Architecture	64-bit (x86_64)
License Type	Enterprise Subscription
Virtualization Support	KVM, VMware, Hyper-V
Cluster Support	Supported
Security	SELinux Enforcing Mode
Firewall	firewalld Supported
File System	XFS / EXT4
Logical Volume Manager	LVM Supported
Multipathing	Device Mapper Multipath (DM-Multipath)
Storage Protocols	FC, iSCSI, NFS
Network Features	VLAN, Bonding, IPv4, IPv6
Monitoring	Cockpit, Red Hat Insights
Patch Management	yum / dnf
System Logging	journald, rsyslog
Cloud & Container Support	Podman, Docker Compatible
Compliance	OpenSCAP Security Compliance
Support Type	Standard / Premium Support
Subscription Validity	5 Years
Updates & Patches	Included for Full Subscription Term
Documentation	Official OEM Documentation
Warranty / Support	As per Red Hat Subscription

12	Red Hat Enterprise Linux (RHEL) (QTY 11)
OS Type	Red Hat Enterprise Linux (RHEL)
Version	RHEL 8.x / 9.x
Architecture	64-bit (x86_64)
License Type	Guest VM Subscription
Hypervisor Compatibility	VMware, KVM, Hyper-V
Virtual NIC Support	VirtIO / VMXNET3
Security	SELinux Enforcing Mode
Firewall	firewalld
File System	XFS / EXT4
Logical Volume Manager	LVM Supported
Application Support	Web, Database, Java, Middleware
Container Support	Podman / Docker
Patch Management	yum / dnf
System Logging	journald, rsyslog

User Management	Local & AD Integrated
Security Hardening	CIS / SCAP Hardening
Backup Compatibility	Veeam, Commvault, Native Snapshots
Monitoring Compatibility	Zabbix / PRTG / Nagios
Support Type	Standard / Premium Support
Subscription Validity	5 Years
Updates & Patches	Included
Documentation	Official OEM Documentation
Warranty / Support	As per Red Hat Subscription

13	RACK 42 U (QTY: 1)
Rack Height	42U
Standard	19-Inch EIA-310-D
Width	600 mm / 800 mm
Depth	1000 mm / 1200 mm
Construction	Heavy-Duty Steel Structure
Finish	Powder Coated
Front Door	Perforated with Lock
Rear Door	Perforated with Lock
Side Panels	Removable & Lockable
Mounting Rails	Adjustable 19-Inch Rails
U-Numbering	Front & Rear U Markings
Ventilation	Top Mounted Fan Tray (4 / 6 Fans)
Cable Entry	Top & Bottom Cable Entry
Vertical Cable Manager	Provided
Horizontal Cable Manager	Provided
PDU	Rack Mount PDU with Surge Protection
Shelf	1 No Fixed / Sliding Shelf
Load Capacity	≥ 1000 Kg Static Load
Mobility	Heavy-Duty Castor Wheels
Levelling Feet	Provided
Earthing Kit	Included
Standards	ISO 9001 Certified Manufacturer
Warranty	5 Years on Rack Frame
Accessories Warranty	1 Year on Fans & PDU