NATIONAL COUNCIL OF SCIENCE MUSEUMS
SECTOR-V, BLOCK-GN, BIDHANNAGAR,
KOLKATA – 700 091.

TENDER NO. I-18012/7/24(189)

Technical Specification

1) Rack Mount Windows Server - 1 no.

Server form factor : Maximum 2U rack mount server with front locking bezel, cable manager, sliding rails & accessories
Processor : Two numbers of Intel® Xeon® Gold 6454S 2.2G, 32C/64T, 16GT/s, 60M Cache, Turbo, HT (270W) DDR5-4800
Memory : 256 GB (8 x 32GB) RDIMM, 5600MT/s, Dual Rank scalable up to 2TB
Storage controller : 12Gbps PCIe controller, 8GB non-volatile cache supporting RAID 1, 5, 6, 10
Hard Disk Drive : 6 x 800GB SSD SAS Mixed Use up to 24Gbps 512e 2.5in Hot-Plug, AG Drive
I/O Slots : Minimum PCIe 4.0 2 x16 slots.
Network Port : Minimum 2 x 1GbE (RJ-45), 2 x 10G Base-T
FC interface : Dual Port FC32 Fibre Channel HBA
Keyboard & Mouse : USB keyboard & mouse
LC-LC Cable : LC/LC cable Multi mode 2mtr Qty 2nos
OS : Windows Server 2022
OS certification : Certified for latest version of Red Hat Enterprise Linux, SUSE Linux Enterprise Server, Microsoft Windows Server, Ubuntu & VMWare
EAL certification : System's integrated remote management hardware & tool should be minimum Evaluation Assurance Level (EAL) EAL2+ certified. Certificate from Common Criteria Portal to be submitted
RPS : 80Plus Platinum certified redundant power supplies (certification evidence from 80Plus portal to be submitted)
Fans : Fully populated redundant hot-swap system fans
Other Interfaces : 1 x 1Gbps system management port (RJ-45), 1 x video port, 3 x USB ports
System health Monitoring : fan, power supply, memory, CPU, RAID, NIC & proactive reporting for impending failure
BIOS : System should boot with & run the BIOS of the OEM make (manufacturer) that is quoted to evaluate intellectual property, MII compliance & security. All updates should happen only using quoted OEM's access controller & management software to enforce security.

Security : Publicly available links, verifiable evidence must be submitted against each of the feature below

- Silicon-based Hardware Root of Trust
- Automatic BIOS recovery
- Firmware drift detection & alerting
- Cryptographically signed firmware updates
- Cryptographically verified trusted booting standards meeting NIST SP 800-147B, NIST SP 800-155, protection standards meeting NIST SP 800-193 standards & secure media sanitization standards meeting NIST SP 800-88
- System lockdown support to lock down configuration and firmware, protecting the server from inadvertent or malicious changes

- Secure default passwords during transit
- Persistent event logging including user activity
- Drive security, including secure system erase for HDD, SSD & NVMe
- Dynamically enabled / disable USB ports to protect from USB-based attacks
- Protection against compromised firmware execution
- UEFI secure boot with custom certificates
- Intrusion alert in case chassis being opened

System Management : Manufacturer's system management software supporting virtual media, virtual folders, remote file share & virtual console

Access & management : Integrated remote access controller & software should support advanced agent-free local and remote server administration & support for features like configuration, firmware updates, OS deployment, health monitoring & diagnostics, automation of routine management activities with perpetual license

Certifications & benchmarks : Relevant product datasheets, certification, benchmark or reference documents verifiable from publicly available data sources must be submitted along with bill of material for detailed bid evaluation. Links for certifications to be submitted.

Authorization : "Manufacturer Authorization Letter" specific to the tender, signed digitally or by OEM's Board authorized signatory has to be submitted.

MII local content : MII Local Content declaration signed digitally or by OEM's Board authorized signatory has to be submitted.

Warranty : Server Warranty includes 3-years parts, 3-years labour, 3-years on-site support with next business day

Installation and Configuration: Installation and configuration of new server and migration of Hyper-V virtual machines from old server to new server. Following points need to be followed.

- Software Licenses activation from OEM
- Unpacking of boxes and assembling of components, if any
- Rack & PDU clean-up for provisioning space of new equipment - server and other devices
- Rack Mounting of all the hardware
- Cable Interconnect between the devices
- Device Power Distribution to Rack PDU
- Power on self-test of new physical server
- BIOS / Firmware code upgrade for new server
- Server HDD Raid Configuration & iDRAC configuration
- Windows Hypervisor installation and configuration (as per existing cluster nodes)
- vNIC and vSwitch configuration on new Hyper-V Host (as per MZ, DMZ, MGMT zone) and redundant uplink configuration for each vSwitch with vLAN segmentation
- New Hyper-V host configuration with OS hardening and VM isolation configuration
- Windows Security profile configuration and OS firewall configuration for inbound and outbound communication
- vNIC redundancy configuration on the hosts and all the vSwitch uplinks
- Guest VM optimization with latest patches as per Microsoft KB
- Network time synchronization with Hyper-V, other guest VMs using existing NTP server
- Existing SAN storage path redundancy configuration for Hyper-V SAN datastore as MS clustered file system

- Optimum level - core to memory ratio allocation to guest VMs - so that failover can be achieved
- Establish Windows Guest VM Cluster with the existing Guest VM
- Existing Windows VM migration from Old Windows Hyper-V host to new Hyper-V host (as is) without impacting the current production environment or business operation
- Existing SAN volume configuration, new volume mapping to new physical host
- Existing Network Switch configuration for addition of New Host
- Before performing any activity, bidder has to submit the activity and downtime plan
- KT to NCSM operation team and project documentation submission

Make & Model Offered: _____

(To be entered by bidder)

Dated **Official Seal** **Signature of the Tenderer/Constituted Attorney**