REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF TRANSPORTATION
MARITIME INDUSTRY AUTHORITY

TECHNICAL SPECIFICATIONS

Project Description	**PROCUREMENT OF ICT EQUIPMENT FOR THE IMPLEMENTATION OF RA 12021 (MAGNA CARTA OF FILIPINO SEAFARERS)**
Approved Budget for the Contract	The supplier shall bid for all items described in this Technical Specifications, which shall not exceed the Approved Budget Contract (ABC) in the amount of Ten Million Five Hundred Thousand Pesos **₱10,500,000.00**, inclusive of all applicable government charges.
Specifications/ Deliverables *(Ex. Size, color, materials used and other specs requirements)*	

Lot 1	**PROCUREMENT OF SERVERS FOR MARINA QUESTION BANK (QBANK) SYSTEM AND MARINA COMPETENCY ASSESSMENT SYSTEM (MCAS)**	**₱3,500,000.00**
Lot 2	**PROCUREMENT OF HYPERCONVERGED SERVER INFRASTRUCTURE (HCI) FOR SEAFARERS' REGISTRY SYSTEM**	**₱7,000,000.00**

Lot 1 - PROCUREMENT OF SERVERS FOR MARINA QUESTION BANK (QBANK) SYSTEM AND MARINA COMPETENCY ASSESSMENT SYSTEM (MCAS)

ITEM	QUANTITY
1. Server	5

Specifications:

1. Core Processing & Memory

- Processor: 1x Multi-Core Server Processor (16 Cores / 32 Threads, 2.0 GHz Base Frequency, 30MB L3 Cache, Turbo Boost, Hyper-Threading, 150W TDP)
- System Memory: 32GB DDR5 ECC Registered RAM (Configured as 2x 16GB RDIMMs, 5600MT/s, Single Rank)

2. Storage & RAID

- Chassis Capacity: 2U Chassis supporting up to 12x 3.5" Hot-Plug Drive Bays (SAS/SATA backplane)
- Storage Drive: 1x 4TB 3.5" Hot-Plug SAS 12Gbps Hard Drive (7,200 RPM, 512n sector format, Instant Secure Erase / Sanitize capabilities)
- RAID Controller: Dedicated PCIe Hardware RAID Controller (Low Profile, minimum 8GB Cache, supporting RAID 0, 1, 5, 6, 10, 50, 60)

3. Networking & Expansion

- On-Board LOM: Dual-Port 1GbE RJ45 Integrated Network Interface Controller
- OCP Slot: 1x OCP 3.0 Type 1/2 compliant slot
- Add-in Network Card: Dual-Port 10/25GbE SFP28 Adapter (PCIe Low Profile)

4. Power, Cooling, & Infrastructure

- Power Supplies: Dual, Redundant (1+1 configuration), Hot-Plug Power Supplies, 800W capacity (100-240Vac input, Platinum-rated efficiency)
- Cooling: 5x High-Performance Hot-Swap System Fans
- Optical Drive: None
- Rail Kit: Sliding Rack Rails with Integrated Cable Management Arm (2U compatible)

5. Management & Support

- System Management: Advanced Embedded Out-of-Band Remote Management Controller (Enterprise License Tier with dedicated RJ45 port, HTML5 Virtual Console, and virtual media support)
- Warranty Support: 3-Year 24/7/365 Advanced Technical Support with Next-Business-Day Onsite Hardware Replacement

Lot 2 - PROCUREMENT OF HYPERCONVERGED SERVER INFRASTRUCTURE (HCI) FOR SEAFARERS' REGISTRY SYSTEM

ITEM	QUANTITY
1. Server (Hyperconverged Infrastructure (HCI)	1

Specifications:

1. Hardware Specifications (Per Node - Min. 2 Nodes)

- Max 2U rack-mountable per cluster node.
- 2x x86-64 CPUs, min. 12 cores each, ≥ 2.4GHz base frequency (Intel Xeon Silver 4510 or better).
- 128 GB DDR5 ECC RAM (populated via min. 4x 32GB modules).
- Min. 2x 960GB Enterprise SSDs.
- Min. 4x 8TB Enterprise HDDs.
- Min. 4x 1GbE ports and 2x 10GbE SFP+ Multimode ports.
- Redundant, hot-swappable Power Supply Units (PSUs).

2. Software & Architecture Requirements

A. Core Platform & Scaling

- Software-defined architecture combining compute (hypervisor) and storage (vSAN). Natively ready for network virtualization (SDN), virtual firewalls, and load balancing.
- Seamlessly add nodes horizontally without system overhauls or cluster reinitialization.
- The management interface is distributed across the cluster, requiring no external client software (accessible via a standard web browser).

B. Compute & Storage Virtualization

- Automated VM restart on surviving hosts during a physical hardware failure.
- Unhealthy hosts are automatically isolated from the VM placement pool and reintegrated only when healthy.
- Supports online "hot-add" of vCPU and vRAM without rebooting VMs.

	• Automated throttling of data rebuilds to protect active production performance. Includes bad-sector auto-repair, capacity trends forecasting, and drive-lifespan predictions. C. Networking & Security • Drag-and-drop graphical panel to design network topologies visually. Supports HA virtual routers. • Distributed firewall to isolate and enforce security rules directly between VMs. • Automated containment (e.g., auto-snapshotting or quarantining a compromised VM) when malicious activity is detected. D. Backup, Recovery and Maintenance • Native conversion tool for major disk formats (VMDK, VHD/X, QCOW2, QEMU). • Agentless, incremental image-level backups with native file-level recovery for Windows VMs. Supports scheduled snapshots and consistency groups. • A built-in VM Recycle Bin with customizable, automated data retention/purging schedules. • One-click cluster/VM reports (Excel/PDF), VM cloning/templating, customizable password complexity policies, and agentless anti-virus offloading. 3. Dedicated Backup Solution • Must fully license the total raw disk capacity of the HCI environment. • Broad support for major virtualization platforms. • Must support scale-out architecture (up to 32 nodes) and data deduplication. 4. Other Requirements • Submit certificates for at least two (2) technical engineers trained on the offered HCI brand. • Documentation for at least two (2) similar scale deployments with client satisfaction/warranty certs. • A valid Manufacturer's Certificate confirming authorized partner status. • The vendor must have a direct, localized technical support presence in the Philippines for immediate escalation.
Warranty	• Warranty Coverage: Three (3) years on parts and labor. • Response Time: In the event of any technical problem within the warranty period, a qualified service support must report on-site to address and resolve the issue. • Replacement Provision: In case of any defect within the warranty period, if the unit cannot be repaired within twenty-four (24) hours from the time the issue is reported, the supplier shall provide a replacement or service unit of the same or higher specifications, free of charge.
Delivery	Sixty (60) Calendar Days upon Receipt of Purchase Order.

Payment Terms	The payment shall be made upon issuance of the Billing Statement on a Bank-to-Bank basis. Automatic Debit Arrangement (ADA) through Land Bank of the Philippines (LBP) facilities, for other Commercial Bank, applicable bank charges shall be for the account of supplier. The supplier shall submit bank details together with billing statement/ invoice for ready reference.
Documentary Requirements	• The bidder must be a legally registered business entity authorized to engage in the supply, delivery, installation, configuration, and support of enterprise Information and Communications Technology (ICT) infrastructure, including servers, hyperconverged infrastructure (HCI), storage, and related solutions. • The bidder must have been engaged in the ICT systems integration, enterprise server, storage, virtualization, or hyperconverged infrastructure business for at least five (5) years prior to the submission of bids. • The bidder must have successfully completed, within the last five (5) years, at least one (1) contract similar in nature and complexity involving the supply, delivery, installation, and commissioning of enterprise servers, hyperconverged infrastructure, or equivalent data center solutions. • The bidder must have qualified technical personnel who are trained and experienced in the installation, configuration, integration, migration, and support of enterprise server, virtualization, storage, and hyperconverged infrastructure solutions. • The bidder shall have the capability to provide warranty support, preventive maintenance, corrective maintenance, firmware and software updates, and technical assistance throughout the required warranty period, including access to manufacturer-certified technical support. • The bidder shall certify that all equipment offered is brand new, unused, currently in production, sourced through authorized distribution channels, and supported by the manufacturer for warranty, software, firmware, and security updates. • The bidder must comply with all applicable requirements of Republic Act No. 12009 (New Government Procurement Act) and its Implementing Rules and Regulations (IRR), including all eligibility, technical, and post-qualification requirements prescribed in the bidding documents.
Note: Prospective suppliers must comply with all of the above requirements to become eligible with the said procurement project.	

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