DOST-ASTI Bids and Awards Committee
Invitation to Bid (Public Bidding)

IB No:	25-10-5457	**Date:**	October-06-2025
PR No:	GATES-25-09-21855	**Date:**	September-05-2025

Source of Funds:	
Total ABC:	Php 86,686,074.00
Time, Date & Venue of Pre-bid Conference:	October 15, 2025, 9:00 AM at Videoconferencing (MS Teams)
Time and Date of Submission of Bids:	October 27, 2025, 09:00 AM
Time, Date & Venue of Opening Bids:	October 27, 2025, 9:30 AM at ASTI and Videoconferencing (MS Teams)
Date of availability of Complete Set of Documents:	October 07, 2025
Deadline of Potential Bidder's Clarifications:	October 18, 2025
Deadline of ASTI's Supplemental Bid Bulletin:	October 20, 2025
Delivery Schedule:	

The *Department of Science and Technology (DOST)* - Advanced Science and Technology Institute (ASTI), through its Bids and Awards Committee (BAC), hereby invites all interested Bidders to submit their bids for the *item/s* listed below. *Section II. Instructions to Bidders (ITB) of the DOST-ASTI Bidding Documents provides information necessary for bidders to prepare responsive bids, in accordance with the requirements of DOST-ASTI. The ITB likewise provides information on bid submission, eligibility check, opening and evaluation of bids, post-qualification, and award of contract.*

Bidding will be conducted through open and competitive bidding procedures, *using a non-discretionary "pass/fail" criterion as specified in Republic Act No. 12009 and its Implementing Rules and Regulations*.

A complete set of *DOST-ASTI Bidding Documents may be acquired by interested Bidders on the date and address given on this document, and upon payment of the applicable fee, pursuant to the latest Guidelines issued by the Government Procurement Policy Board. Further, the DOST-ASTI Bidding Documents may be accessed through the DOST-ASTI website (https://asti.dost.gov.ph/).*

For further inquiries, *you may contact the* ***DOST-ASTI BAC Secretariat*** *at telephone number* ***+63 2 8249-8500 local 1214*** *or send your message to* ***bac-sec@asti.dost.gov.ph***.

Respectfully,

Digitally signed by Jelina Tanya H. Tetangco

JEFFREY A. ABOROT
BAC Chairman

NO.	TECHNICAL SPECIFICATIONS	QTY	UNIT	UNIT PRICE(Php)	TOTAL PRICE(Php)
1	**COMPUTING, STORAGE AND RELEVANT EQUIPMENT** 1. GENERAL OVERVIEW 1.1. DOST-ASTI is seeking qualified and competent bidders for the SUPPLY AND DELIVERY OF ONE (1) LOT OF COMPUTING, STORAGE AND RELEVANT EQUIPMENT to be used as core infrastructure for Artificial Intelligence (AI) and related computational workloads of GATES Project 2. 1.2. The Approved Budget for the Contract (ABC) includes all applicable government taxes and services charges.	1	lot	86686074.00	86,686,074.00

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2. TECHNICAL SPECIFICATIONS
2.1. GPU Server
2.1.1. General requirements
2.1.1.1. The system shall be a high-performance, enterprise-grade rackmount platform designed for continuous operation, capable of supporting hot-swappable storage drives and redundant, hot-swappable power supplies. It shall provide high-bandwidth InfiniBand or equivalent low-latency interconnect technology for AI and storage workloads, and a scalable architecture to accommodate future GPU upgrades and storage capacity expansions.
2.1.2. GPU Server
2.1.2.1. Quantity: Two (2) units
2.1.2.2. Amount: PhP28,735,717.55 x 2 units = PhP57,471,435.10
2.1.2.3. Minimum Hardware Specifications
2.1.2.3.1. Form Factor: 8U Rackmount
2.1.2.3.2. Processor
2.1.2.3.2.1. Two (2) Server-grade CPUs, each with a minimum of 32 physical cores
2.1.2.3.2.2. Minimum 2.2GHz base clock speed
2.1.2.3.2.3. Thermal Design Power (TDP) of approximately 225W per CPU
2.1.2.3.2.4. Support for simultaneous multithreading and high-speed multi-socket interconnect
2.1.2.3.3. Graphics Processing Units (GPU)
2.1.2.3.3.1. GPU Capacity: Support eight (8) high-performance compute GPUs in SXM or equivalent form factor
2.1.2.3.3.2. GPU Memory: Each GPU must have a minimum 141GB HBM3 or HBM3e, with at least 3.3 TB/s memory bandwidth per GPU
2.1.2.3.3.3. CPU-CPU Interconnect: Must provide PCI express (PCIe) Gen 5.0 x16 high-speed interface from CPU to each GPU.
2.1.2.3.3.4. GPU-GPU Interconnect: Must include high-bandwidth, low-latency direct GPU-to-GPU communication fabric (e.g NVLink with NVSwitch)
2.1.2.3.3.5. GPU Features and Software Compatibility
2.1.2.3.3.5.1. Must support CUDA, NCCL, cuDNN, TensotRT, and GPU direct RDMA or equivalent frameworks
2.1.2.3.3.5.2. Must support mixed-precision computation (FP64, FP32, TF32, FP16, BF16, INT8, INT4) for optimized AI training, inference, and scientific computing
2.1.2.3.4. System Memory
2.1.2.3.4.1.1. Minimum 32x 64GB DDR ECC RDIMM modules
2.1.2.3.5. Drive Bays Configuration
2.1.2.3.5.1. Default: 12 x 2.5” NVME hot-swap + 3 x 2.5” STA hot-swap
2.1.2.3.5.2. Upgrade (Optional): +4 NVME hot-swap bays (total 19 bays)
2.1.2.3.6. Expansion Slots
2.1.2.3.6.1. 8x PCIe Gen 5.0 x16 LP, 2x PCIe Gen 5.0 x16 FHHL
2.1.2.3.7. Network Connectivity
2.1.2.3.7.1. 2x RJ45 10GbE

2.1.2.3.7.2. 2x SFP28 25GbE
2.1.2.3.7.3. 2x RJ45 10GbE
2.1.2.3.8. Cooling and Power
2.1.2.3.8.1.1. 10 heavy-duty fans with optimal fan speed control
2.1.2.3.8.1.2. Minimum: 6x 3000W (3+3) redundant, Titanium Level (96%) efficiency
2.1.2.3.9. Environmental
2.1.2.3.9.1.1. Operating Temp: 10 Degree Celsius to 35 Degree Celsius
2.1.2.3.9.1.2. Operating Humidity: 8-90% (non-condensing)
2.1.2.3.10. Dimensions and Weight
2.1.2.3.10.1. Gross weight: Approximately 225 lbs (102.1 kg)
2.1.2.3.10.2. Net weight: Approximately 166 lbs (75.3 kg)
2.1.2.3.10.3. Chassis: Black front panel with silver body or equivalent industry-standard finish
2.1.2.3.11. Motherboard
2.1.2.3.11.1. Enterprise-grade dual-socket board compatible with the specified processors, memory, and other specification provided.
2.1.2.3.11.2. Integrated BMC with IPMI 2.0
2.1.2.3.12. In Rack Cabling
2.1.2.3.12.1. Provide 6x MMF, MPO12 APC to 2x MPO12 APC, 3 meters, RoHS Compliant
2.1.2.3.12.2. Provide 10x 200GbE QSFP56 MPO, 850nm, SR4 transceivers (100m)
2.1.2.3.12.3. Provide 4x 800G OSFP dual NDR MPO12 APC, 850nm MMF Transceivers (50m)

2.1.3. Storage Rack
2.1.3.1. Amount: PhP18,086,680.05
2.1.3.2. Enclosure
2.1.3.2.1. Quantity: One (1) 6U rackmount enclosure supporting a mix of compute and control nodes
2.1.3.2.2. Configuration
2.1.3.2.2.1. Worker Nodes: Five (5) high-performance compute nodes
2.1.3.2.2.2. Processor (per working node)
2.1.3.2.2.2.1. Dual-socket server-grade CPUs, minimum 48 cores per processor, based frequency 2.0 GHz or higher, TDP up to 330W, supporting the latest generation architecture equivalent to Intel Xeon 5th Gen
2.1.3.2.2.3. Memory (per worker node)
2.1.3.2.2.3.1. Minimum 512 GB DDR5-5600 RDIMM ECC (8x 64GB) or equivalent
2.1.3.2.2.4. Storage (per worker node)
2.1.3.2.2.4.1. Minimum 1.92 TB total SSD storage using enterprise-grade SATA or NVMe drives (2x 960GB)
2.1.3.2.2.5. Networking (per worker node)
2.1.3.2.2.5.1. High-speed interconnect supporting 200Gbps HDR InfiniBand or equivalent, dual port QSFP56 Interface
2.1.3.2.3. Control Nodes
2.1.3.2.3.1. Three (3) management/control nodes within the enclosure
2.1.3.2.3.2. Processor (per control node)

2.1.3.2.3.2.1. Single-socket server-grade CPU, minimum 16 cores, base frequency 2.0 GHz or higher, TDP up to 150W, latest generation architecture equivalent to Intel Xeon 5th Gen
2.1.3.2.3.3. Memory (per control node)
2.1.3.2.3.3.1. Minimum 128 GB DDR5-5600 RDIMM ECC (2x 64GB) or equivalent
2.1.3.2.3.4. Storage (per control node)
2.1.3.2.3.4.1. Minimum 1.92 TB total SSD storage using enterprise-grade SATA drives (2x 960 GB)
2.1.3.2.3.5. Networking (per control node)
2.1.3.2.3.5.1. high-speed interconnect supporting 200Gbps HDR InfiniBand or equivalent, dual port QSFP56 interface

2.1.3.3. Storage Server
2.1.3.3.1. Quantity: One (1) high capacity storage server
2.1.3.3.2. Form Factor: 4U Rackmount Chassis
2.1.3.3.3. Processor
2.1.3.3.3.1. Dual-socket server-grade CPUs, one with at least 16 cores @ > 2.3 GHz and one with at least 8 cores @ > 3.0GHz, each with 72MB cache and up to 150W TDP
2.1.3.3.4. Memory
2.1.3.3.4.1. Minimum 256 GB DDR5 RDIMM ECC (8x 32 GB) or equivalent
2.1.3.3.5. Primary Storage
2.1.3.3.5.1. At least 768 TB of enterprise-grade SAS HDD storage (48x 16TB) configured for fault tolerance
2.1.3.3.6. Cache/OS Storage
2.1.3.3.6.1. Minimum 3.84TB total NVMe M.2 SSD capacity (4x 960GB)
2.1.3.3.7. Networking
2.1.3.3.7.1. Two (2) high-speed interconnect adapters supporting 200Gbps HDR InfiniBand or equivalent, each with dual QSFP56 ports
2.1.3.3.8. Cabling
2.1.3.3.8.1. Optical or active copper cables complaint with HDR InfiniBand or equivalent technology, 3 meters, RoHS Complaint
2.1.3.3.8.2. Minimum: 6x 400G-to-dual-200G OSFP-to-QSFP56 cables (active optical or equivalent)

2.1.4. Software Features
2.1.4.1. The system shall include management solution with the following capabilities
2.1.4.1.1. Centralized Infrastructure Management
2.1.4.1.1.1.1. Unified platform for managing multiple servers, storage and network devices within the data centers
2.1.4.1.2. Real-time monitoring
2.1.4.1.2.1. Monitoring of hardware status, power consumption, temperature, and performance metrics
2.1.4.1.3. Automatic update and patch management
2.1.4.1.3.1.1. Schedule and deployment of firmware BIOS, and driver updates across multiple systems tools r
2.1.4.1.4. Offline Diagnostics
2.1.4.1.4.1.1. Proactive alerts, predictive failure analysis, and offline diagnostics tools for hardware

troubleshooting
2.1.4.1.4.1.1.1. Proactive alerts, predictive failure analysis,
2.1.4.1.5. Automation Assistant
2.1.4.1.5.1. Automation and Orchestration Utilities
2.1.4.1.5.1.1. Tools for automating server provisioning, configuration, and lifecycle operations
2.1.4.1.6. Remote Management Utilities
2.1.4.1.6.1. Out-of Band IPMI tools for remote access, control and configuration

2.2. Network Switch Specifications:
2.2.1. Spine Switch
2.2.1.1. Amount: PhP7,147,942.00
2.2.1.2. Form Factor: 1U Rackmount
2.2.1.3. Ports
2.2.1.3.1. Minimum 64 non-blocking InfiniBand ports at up to 400Gb/s each
2.2.1.4. Aggregate Throughput: Minimum 51.2Tb/s bidirectional
2.2.1.5. Packet Processing Rate: At least 66.5 billions packets per second (BPPS)
2.2.1.6. Interface Type: OSFP transceiver-based high speed ports
2.2.1.7. Power and Cooling
2.2.1.7.1. Redundant, hot-swappable power supplies
2.2.1.7.2. Redundant, hot-swappable fan modules
2.2.1.8. Management Interface
2.2.1.8.1. USB, Console, and Ethernet Management ports
2.2.1.8.2. Software Features
2.2.1.8.2.1. Remote Direct Memory Access (RDMA)
2.2.1.8.2.2. Adaptive routing for congestion avoidance
2.2.1.8.2.3. Quality of Server (QoS) with enhanced virtual lane mapping
2.2.1.8.2.4. Self-healing network functions
2.2.1.8.2.5. Congestion control for optimized throughput
2.2.1.8.2.6. Scalable Hierarchical Aggregation and Reduction Protocol (SHARPv3) for in-network computation and data aggregation
2.2.1.8.3. In-Network computing
2.2.1.8.3.1. Integrated support for application-level reduction operations directly within the switch fabric
2.2.1.8.3.2. Capability to reduce inter-node communication overhead and accelerate collective operations in parallel computing environments

2.2.2. Access Switch
2.2.2.1. Amount: PhP3,980,016.85
2.2.2.2. Form Factor: 1U rackmount
2.2.2.3. Ports
2.2.2.3.1. Minimum 48 x 100G QSFP28 ports
2.2.2.3.2. Uplinks: Minimum 8x 100G/400G QSFP-DD uplink/aggregation ports
2.2.2.4. Aggregate Switching Capacity
2.2.2.4.1. At least 16.0 Tbps
2.2.2.5. Packet Forwarding Rate
2.2.2.5.1. Capable of not less than 5,350 Mpps
2.2.2.6. Interface Type
2.2.2.6.1. Supports for QSFP28, QSFP56, and

QSFP-DD transceiver-based high-speed ports and supports for breakout modes
2.2.2.7. Power and Cooling
2.2.2.7.1. 1+1 redundant, hot-swappable power supply modules
2.2.2.7.2. Input support for AC 100-240V
2.2.2.7.3. Minimum 5+1 redundant, hot-swappable fan modules with automatic speed adjustment
2.2.2.8. Management Interface
2.2.2.8.1. At least 1 x RJ45 Console Port
2.2.2.8.2. At least 1 x RJ45 Management Port
2.2.2.8.3. At least 1 x USB 2.0 Type-A port
2.2.2.9. Software Features
2.2.2.9.1. IPv4/IPv6 Dual-Stack with full Layer 2 and Layer 3 Routing (BGP4, OSPFv2/v3, RIP/RIPng/, ECMP, PBR)
2.2.2.9.2. RMDA over Converged Ethernet with PFC and ECN for lossless, low-latency performance
2.2.2.9.3. VXLAN bridging and gateway, IPv6 VxLAN over IPv4, ECN over VXLAN, PFC over VXLAN
2.2.2.9.4. Quality of Service (QoS)
2.2.2.9.4.1. Support for priority mapping, multi-queue scheduling
2.2.2.9.5. High Availability Features
2.2.2.9.5.1. Graceful Restart, Bidirectional Forwarding Detection (BFD), Device Link Detection Protocol (DLDP), Rapid Link Detection Protocol (RLDP), dual-link fast switching
2.2.2.9.5.2. Management Protocols
2.2.2.9.5.2.1. SNMPv1/v2c/v3, CLI, Telnet, SSH, NETCONF
2.2.2.9.5.3. Traffic Monitoring
2.2.2.9.5.3.1. SPAN, RSPAN, sFLOW, IPFIX

3. PACKAGE INCLUSION
3.1. Cable set as indicated above, including all required network, interconnect, and transceiver cables
3.2. Power cable suitable for the specified equipment, compliant with RoHS and Data Center grade standards
3.3. Rail kits for all supplied rackmount equipment
3.4. All necessary accessories for installation

4. SCOPE OF WORK
4.1. GPU Servers
4.1.1. Winning Bidder will provide Initial Assessment & Planning for Storage Allocation & Network Connectivity for the AI Servers.
4.1.2. Winning Bidder will provide configuration for BIOS & Storage Allocation (RAID configuration; OS storage allocation) for the AI Servers.
4.1.3. Winning Bidder will provide configuration for Network Connectivity of the AI servers. Limited to connectivity from AI Servers to bidder provided Top-of-Rack Switches.
4.1.4. Winning Bidder will not install the OS from DOST-ASTI but will provide assistance if the need arises.
4.1.5. Winning Bidder will provide Incident Response with defined SLAs for the AI Servers.

4.2. Storage Rack

4.2.1. Winning Bidder will provide Initial Assessment & Planning for Storage Allocation & Network Connectivity for the Worker Nodes, Control Nodes, & Storage Bay Server.

4.2.2. Winning Bidder will provide configuration for BIOS & Storage Allocation (RAID configuration; OS storage allocation) for the Worker Nodes, Control Nodes, & Storage Bay Server.

4.2.3. Winning Bidder will provide configuration for Network Connectivity of the AI Storage Worker Nodes, Control Nodes, & Storage Bay Server. Limited to connectivity from AI Storage nodes to bidder provided Top-of-Rack Switches.

4.2.4. Winning Bidder will not install the OS from DOST-ASTI but will provide assistance if the need arises.

4.2.5. Winning Bidder will provide Incident Response with defined SLAs for the AI Storage System.

4.3. Network Switch

4.3.1. Winning Bidder will provide Initial Assessment & Planning for Network Connectivity for the AI servers, Worker Nodes, Control Nodes, & Storage Bay Server.

4.3.2. Winning Bidder will provide configuration for the Top-of-Rack-Switches.

4.3.3. Winning Bidder will provide installation & configuration for Network Connectivity of the Top-of-Rack switches to the AI Servers, AI Storage Worker Nodes, Control Nodes, & Storage Bay Server.

4.3.4. Winning Bidder will provide all required accessories for connectivity of the AI Servers, AI Storage Worker Nodes, Control Nodes, & Storage Bay Server.

4.3.5. Winning Bidder will provide all network cables going to the DOST-ASTI network but will not provide configuration services to existing network switches under DOST-ASTI. DOST-ASTI will provide their own 100G SFP Modules.

4.3.6. Winning Bidder will provide Incident Response with defined SLAs for the AI Storage System.

5. QUALIFICATIONS OF BIDDER

5.1. Bidder must be certified to implement & support both software & hardware of the proposed AI infrastructure.

5.2. Bidder must be certified to implement & support hardware of the proposed Top-of-Rack Switches.

5.3. Bidder must have a Certified Personnel for Virtualization Solutions.

5.4. Bidder must have a Certified Personnel for Network Security Solutions.

5.5. Bidder must have a Certified Personnel for Storage Solutions.

5.6. Bidder must provide Manufacturer Certificate.

6. TECHNICAL SUPPORT SERVICES

6.1. Technical support service must be available eight (8) hours per day, Monday to Friday (including holidays), 9:00 AM – 5:00 PM Philippines Standard Time (UTC+8) during business hours.

6.2. End-user must request technical support via

	phone, email, or through a website. 6.3. Response Time: Eight (8) business hours and updates every five (5) business days for high severity issues that incur serious degradation to unit performance or functionality. 6.4. Refer to the attached Service Level Agreement for other expected technical support services. 7. WARRANTY 7.1. Must have at least three (3) years of warranty and maintenance from the time of delivery which covers defects in materials. 7.2. Warranty service shall commence from the date of end-user acceptance. 7.3. Any replacement service must be successfully performed within thirty (30) calendar days. 8. DELIVERY AND PAYMENT TERMS 8.1. Upon issuance of Notice to Proceed NTP, the item must be delivered on or before February 23, 2026. 8.2. Full payment will only be processed once the item is completely delivered, inspected, and accepted by the End-user. 8.3. No payment shall be made for the items not delivered under this contract. 8.4. All items shall be delivered to DOST-ASTI. 8.4.1. Upon request by the end-user, the winning bidder shall shoulder the transportation expenses and make the necessary arrangements for installation at the end-user's designated location.				
TOTAL APPROVED BUDGET FOR THE CONTRACT (ABC):					**Php 86,686,074.00**

RESERVATION CLAUSE

The Advanced Science and Technology Institute reserves the right to accept or reject any proposal, to annul the bidding process, and to reject all proposals at any time prior to contract award, without thereby incurring any liability to the affected proponent or proponents.