UNIVERSITY OF SCIENCE AND TECHNOLOGY OF SOUTHERN PHILIPPINES
Alubijid | Balubal | Cagayan de Oro | Claveria | Jasaan | Oroquieta | Panaon | Villanueva

OFFICE OF THE BIDS AND AWARDS COMMITTEE II

BID FORM

NAME OF THE PROJECT : **PROPOSED PROCUREMENT OF THE SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF HYPER-CONVERGED INFRASTRUCTURE SERVER FOR DIGITAL TRANSFORMATION OFFICE CY 2024**

APPROVED BUDGET OF CONTRACT : **SIX MILLION PESOS AND 00/100 (P6,000,000.00) ONLY**

BRIEF DESCRIPTION : **SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF HYPER-CONVERGED INFRASTRUCTURE SERVER FOR DIGITAL TRANSFORMATION OFFICE CY 2024**

SOURCE OF FUND : **IGI CY 2024**

CONTRACT DURATION : **SIXTY (60) CALENDAR DAYS (ONE LOT)**

ITEM NO.	DESCRIPTION/SPECIFICATIONS	QTY	UNIT	USTP APPROVED UNIT PRICE	UNIT PRICE	AMOUNT
1	**2-NODES GEN3 HYPER-CONVERGED INFRASTRUCTURE (HCI) WITH RACK CABINET AND MANAGED SWITCH** A. 2-NODE GEN3 HYPER-CONVERGED INFRASTRUCTURE (HCI) APPLIANCE: • For Each node: - 2x CPUs (Intel Xeon Silver 4314 2.4GHz 16C/32T 135W) - 128GB RAM - 2x 240GB SATA SSD OS Disk - 32 RAM Slots - 64TB (4x 16TB) Enterprise HDD - 1x RAID Card - 12+2 Disk Slots - 4x GE + 2x 10GE Network Interface Cards - 4x USB3 ports - 3x PCIE Slots - Redundant Power Supply, 227W-900W Working Power • 3-YEAR HCI SOFTWARE LICENSE WITH FUNCTIONALITIES INCLUDING: - Server Virtualization (HA, DRS, Automated Hot Add, Backup, Clone, Sub Administrator) - Network Virtualization (Distributed Firewall, Drawable Topology, etc.) - Storage Virtualization (2-3 Copies, SSD Read & Write Acceleration, Storage Tiering, Data Locality) • ACCESSORIES AND PERIPHERALS: - 1.9TB Enterprise Grade SSD (3D NAND TLC, 2.5", mixed-use, SATA 3.0 6Gbps) - 4x 3m LC-LC Multimode Fiber Optic Cables - 4x SFP+ 10GE Multimode Optical Transceivers (850nm, 300M) • 1x MANAGED SWITCH: - 12-Port Multi-GE PoE Switch with Cloud Management - Full 1/2.5/5/10GE ports - 25G Uplink (4 x 10GE/25GE SFP28 ports) - PoE/PoE+/PoE++ support - Fixed AC power supply and fan	1	lot	6,000,000.00	P	P

ITEM NO.	DESCRIPTION/SPECIFICATIONS	QTY	UNIT	USTP APPROVED UNIT PRICE	UNIT PRICE	AMOUNT
	B. 1x SERVER RACK CABINET WITH UPS: - 42U rack height - 39 inches deep - Glass/mesh doors - Cable management trays - Built-in Power Distribution Unit (PDUs) and - Electrical provisioning from USTP electrical source to the data cabinet to power up HCI server (includes all consumables, need site visit for assessment) - Uninterrupted Power Supply (UPS), 2000VA/1800watts, Rackmount 2U, Input 230V, 4x IEC C13 outlets, Intelligent Card Slot, High operating efficiency in energy-saving ECO mode, Prolonged battery life with intelligent temperature-compensated charging, Easy-to-read LCD interface for detailed and accurate information on UPS status. Include rail kit for the cabinet installation. C. WITH IN-PERSON PROFESSIONAL TRAINING: - Develop a training schedule approved by USTP-DTO. - Provide in-person, all-expense paid technical training at Cagayan de Oro City for 10 participants for 5 days. - Provide training materials and resources accessible to trainees. - Trainers are expected to proficiently conduct, facilitate, and handle HCI and Advanced Enterprise Core Technology training sessions as per project requirements. NOTE: Please see attached Terms of Reference					
					TOTAL:	**P**

Total Bid Price in Figure:_____
Total Bid Price in Words:_____
Name and Signature of Bidder:_____

All bid proposals must be sealed in envelopes properly labeled and submitted to this University on or before the deadline of submission of bids, **JUNE 17, 2024, 09:30 A.M.** at the Procurement Services, 2nd Level Gymnasium Lobby, University of Science and Technology of Southern Philippines, C.M. Recto Ave., Lapasan Cagayan de Oro City.

The University of Science and Technology of Southern Philippines assumes no responsibility whatsoever to compensate or indemnify bidders for any expenses incurred in the preparation of the bid. The USTsP neither assumes any obligation for whatsoever losses that the bidders may incur in the preparation on their bids nor guarantee that an award will be made.

ATTY. ERWIN B. BUCIO
BAC II Chairperson

TERMS OF REFERENCE (TOR)

Project Title: Supply, Delivery, Installation and Commissioning of 2-Nodes Gen3 Hyper-Converged Infrastructure (HCI) with Rack Cabinet and Managed Switch for the University of Science and Technology of Southern Philippines (USTP).

1. Introduction and Rationale:

The University of Science and Technology of the Philippines (USTP) intends to procure and install a 2-Node Gen3 Hyper-Converged Infrastructure (HCI) system to enhance data center capabilities and support critical IT operations. This Terms of Reference (TOR) outlines the technical specifications, project requirements, and selection criteria for the procurement process.

2. Project Objectives:

This project has the following objectives:

2.1. **HCI Procurement:** Ensure the procured HCI system meets the technical specifications outlined in the TOR, including processing power, storage capacity, and network connectivity. Achieve optimal performance for virtualized workloads and support USTP's IT needs. This project procurement is beyond just purchasing HCI hardware.
2.2. **Admin and User Technical Training:** Provide comprehensive and inclusive in-person training on HCI and Datacenter applications to DTO and ICT Staff. The purpose is to capacitate USTP-DTO and USTP-CDO ICT technical staff.
2.3. **After-sales Support:** Ensure after-sales support availability throughout the subscription and warranty period.
2.4. **Minimize Risks:** Mitigate risks associated with compatibility issues, improper installation, and inadequate training by selecting a qualified supplier, competent technical staff, and a proven track record.

3. Definition of Terms and Technologies:

Technology and its Functions	Description
3.1. **Technology**	**Hyper-converged Infrastructure (HCI)** is a software-defined IT infrastructure that virtualizes all the elements of conventional "hardware-defined" systems. HCI includes, at a minimum, virtualized computing (hypervisor), virtualized SAN (software-defined storage), and virtualized networking (software-defined networking). The HCI must be also capable and ready for network virtual security (Virtual Firewall, Bandwidth Manager, SSL VPN, WAN Optimization).

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	• The HCI solution should start with a minimum of two nodes, and still expand from 2 nodes to more nodes directly without redoing of implementation or re-initialization of HCI. • The management platform is integrated and distributed, not relying on a certain virtual machine or physical machine, which is more reliable. • Thus, HCI does not require installing additional management software after deployment of the hypervisor to achieve basic web-based access to GUI, granular management, and easy operation. • The crucial components for virtualization of computing, storage, networking, network functions, application firewall, and application delivery controller, are provided by the same vendor, to ensure scalability and compatibility. Support correlated security service with intelligent threat detection and response platform to automatically take actions (such as quarantine VM by a distributed firewall, take a snapshot for VM, etc,.) against malicious activities that are detected by the security platform.
3.2. **Compute Virtualization**	• Should have high availability. In case the host fails, all the VMs running on that host can be recovered to another clustered host to ensure business continuity. • Backup is built-in by default and supports agent-less incremental VM-level backup. For Windows VMs, file-level recovery must be supported. • Should have built-in back-up and support agent-less incremental VM-level back-up. For Windows VMs, file-level recovery must be supported without using 3rd Party solutions. • Support snapshot consistent group and scheduled snapshots. • Able to evaluate the performance of virtual machines and hot-add resources (vCPU and vRAM) when they are running out of CPU or memory, minimizing business downtime. • Must have a module Activated CDP (Continues Data Protection) capable of recording VMs' IOs at an interval as minimum as 1 second, data can be restored at any point of time in the past 3 days for both clusters. • AI-enhanced database performance optimization with built-in self-adaptive performance optimization engine. • Support host health monitoring, when a host is deemed unhealthy, it will be put in an unhealthy host list, VM placement, and HA failover will avoid using the unhealthy host as a destination. When the host is back to normal, it can be taken out of the unhealthy host list automatically.
3.3. **Storage Virtualization**	• Storage is in distributed architecture where more than one storage nodes are composed of a Storage Area Network (SAN) that can be scaled out (by increasing nodes) to expand storage capacity and performance. • Support access via iSCSI, to enable other hosts in the cluster to use iSCSI to access the virtual storage, and making Server SAN and IP SAN work together, and maximize storage utilization. • A full copy of the VM's data should have existed on the node where the VM is running to facilitate faster read and write. • The virtual storage of Cluster must make use of SSD as cache tier and spinning disk as data tier to ensure performance and cost balance. Data is written to SSD first and read from SSD in priority to improve performance. • Data that is frequently accessed (also called hot data) can use SSD as a persistent storage media, when the VM is migrated or the host is rebooted, the hot data must still reside in the SSD for fast retrieval.

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	• Support disk bad sector prediction, scanning, and repair to maximize data security. • Support storage capacity prediction based on historical usage statistics and consumption behavior. • Support disk remaining lifecycle prediction.
3.4. **Network Virtualization**	• Natively supports deploying virtual routers, virtual switches, and firewalls. • Built-in distributed firewall to apply granular access control policy between VMs, securing east-west traffic (also known as Micro-segmentation). • The virtual router supports high availability. A failed virtual router can be automatically recovered upon host failure, to ensure the high availability of routing service. • Visualized Network topology can be completed simply by dragging objects and drawing connections via a visualized web-based management panel.
3.5. **Security**	• The hypervisor must be with a native web application firewall daemon process. • Must be ready for module-activated virtual firewall and endpoint protection platform that can protect against known and zero-day attacks. Should be ready with below features: a) Provides timely and full protection with threat intelligence services to perform automatic scans, give alerts on the latest high-threat vulnerabilities and/or one-button click protection. b) Weak password scanning for common network services (SSH, FTP, RDP, VNC, Netbios) and database types (MySQL, Oracle, MSSQL) to provide full protection. c) Scan servers in B/S(browser/server) architecture for vulnerabilities like SQL injection, Cross-Site Script (XSS), path traversal, File inclusion, command execution. d) Brute-force attack protection for common network services (HTTP, FTP, SSH, SMTP, and IMAP) and database types (MySQL, Oracle, MSSQL) to provide full protection.
3.6. **Advance Features**	• Must be capable of license-activated Disaster Recovery a) Disaster recovery solution must be from the same vendor of the underlying virtualization platform. b) No additional backup or replication software is required. c) Support non-disruptive DR testing to validate DR solution effectiveness with zero impact on production business. d) Provide flexible RPOs, minimum 1 second. e) Support data compression and encryption in the replication. f) Support ingesting data with portable disks in the production cluster and importing data to the DR cluster to save bandwidth consumption. g) DR monitoring should be supported with real-time status display of VMs and clusters at both sites as well as link health status and RPO compliance. • Must be capable of license-activated multi-cluster management h) Support defining availability zones, multi-cluster management across regions, support management for no less than 20000 cloud hosts.

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	i) Support management for 3rd party server virtualization platform, provide management for VMs on VMware, support direct edit of VMware VM configurations including vCPU, RAM, disks, and vNICs. j) Provide a self-service portal, users can complete tasks like applying for VM resources and changing VM configuration through this portal. k) Support multi-tenancy, platform admin can distribute CPU, RAM, storage, and other resources to different tenants. l) The cloud management platform and the underlying resource pool (compute virtualization, storage virtualization, network virtualization) must be from the same vendor, they must also support NFVs like virtual application firewall and virtual application delivery from the same vendor to ensure compatibility of the platform. m) Support application center for easy and secure application upload and deployment so that tenants can easily and quickly download packaged applications to start using directly.

4. Scope of Work and Deliverables:

The project covers the **Supply, Installation, Configuration and Commissioning of 1 set HCI solution** that is branded and brand new with security and networking capabilities to include:

4.1. **Warranty/ After-sales Support/Managed Services/Support Services:**

The Warranty is a guarantee provided by the manufacturer or seller that the product will function as intended for a specific period. It outlines what repairs or replacements will be covered in case of malfunction during the warranty timeframe.

4.1.1. 3-year subscription to HCI software licenses with patches and upgrades
4.1.2. 3-year warranty on HCI server and 1-year warranty on other hardware components with on-site repair and maintenance including provision of RTF option (Return-To-Factory)
4.1.3. Technical support for 1 year with HCI Solution must have direct local support in the Philippines.
4.1.4. Provide a notarized affidavit of undertaking for after-sales support, ensuring commitment during the warranty and after the warranty period.

4.2. **Certifications:**

By requiring bidders to possess specific qualifications, USTP minimizes risks associated with the HCI project. Qualified bidders bring the expertise to identify and avoid compatibility issues during installation, configure the system for optimal performance tailored to USTP's needs, and deliver high-quality training that empowers staff to effectively manage and troubleshoot the HCI system.

4.2.1. Proof of status as an authorized HCI Server reseller or partnership agreement from the manufacturer. This ensures the bidder has a direct relationship with the HCI manufacturer and access to technical support, resources, and genuine equipment.
4.2.2. Training center located within the Mindanao area. Having a local training center in Mindanao allows for easier access to training for USTP staff after installation.
4.2.3. The HCI solution must be from a reputable international brand with a local presence and a local depot of parts and supplies.
4.2.4. Personnel with valid certifications and proof of employment. The specified certifications demonstrate the bidder's personnel possess the knowledge and skills necessary for a successful HCI implementation.

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4.2.4.1. At least one (1) Certified Enterprise Network Professional. Ensures expertise in network design and configuration, critical for integrating the HCI system seamlessly.
4.2.4.2. At least one (1) Secured Cloud Computing Practitioner. Highlights knowledge of security best practices for cloud-based environments like HCI.
4.2.4.3. At least one (1) Certified Specialist in Data Center Core and Certified Specialist in Enterprise Advanced Infrastructure. Demonstrates expertise in data center operations, maintenance, and infrastructure management, all crucial for HCI deployment.
4.2.4.4. At least one (1) Certified Specialist in Enterprise Design. Shows knowledge of designing and optimizing enterprise IT systems, including aspects like storage and network configuration.
4.2.4.5. At least one (1) Trainer with Expert Level Instructor Certificate. Ensures the bidder's training program is delivered by a highly qualified professional.

4.3. **Bidder's Project Team Composition:**

The bidder shall present a project organizational structure of the implementation team who shall liaise with USTP and shall implement and support the system 24/7. This document shall be notarized and include the names, contact numbers and proof of employment of the implementation team:

4.3.1. **One (1) Project Manager:** Oversee all project aspects, and coordinate with USTP stakeholders (Digital Transformation Office, and ICT Office of USTP-CDO).
4.3.2. **One (1) Technical Lead:** Possesses in-depth knowledge of HCI systems, hardware, and software. Oversees the technical aspects of the project, including installation, configuration, and testing. Ensures all technical specifications outlined in the TOR are met.
4.3.3. **Implementation Team:** Composed of qualified engineers with experience in HCI deployments. Responsible for the physical installation of the HCI system, managed switch, and rack cabinet. Conducts configuration and testing to ensure proper functionality of the system.
4.3.4. **Training Team:** Led by a certified trainer with an Expert Level Instructor Certificate. Comprised of personnel with relevant HCI certifications (e.g., network security, storage) depending on the specific training modules offered. Develops and delivers training materials tailored to USTP staff needs. Conducts training sessions on HCI system operation, management, and troubleshooting.

4.4. **Deliverables and Project Timeline (60CD):**

4.4.1. The supplier shall deliver all equipment to the designated location within the USTP data center (3rd Floor, ICT Office, ICT Building, USTP-CDO, Lapasan, Cagayan de Oro City).
4.4.2. Professional installation of the HCI system-managed switch and rack cabinet is required.
4.4.3. The supplier shall conduct configuration, replacement, fine-tuning, troubleshooting, and testing to ensure the proper functionality of the system.
4.4.4. Conduct required training.

4.5. **Evaluation Criteria:**

4.5.1. HCI Solution manufacturer/vendor must have Capability Maturity Model Integration (CMMI) Level 5 certified to ensure the maturity and long term support of the HCI manufacturer/vendor.
4.5.2. HCI Solution manufacturer/vendor is included in the Gartner Magic Quadrant for Hyperconverged Infrastructure to ensure long-term support.
4.5.3. Experience in supplying and installing HCI systems.

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4.6. **Technical Support and Service Request Response Time:**

4.6.1. Within 4 hours: Time to acknowledge the service request
4.6.2. Within 24 hours: Time to revert with initial blueprint/data gathering
4.6.3. Within 48 hours: The solution request is shared with the level of complexity
4.6.4. End User Support (Phone/Email/Remote)

Prepared by:

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