

TENDER INVITATION FOR IT INFRASTRUCTURE SUPPLY AND INSTALLATION

Rajagiri School of Engineering & Technology (RSET) invites tenders through the following Request for Proposals from OEMs and authorized partners (bidders) for the supply, installation, and warranty support of IT infrastructure.

1. Implementation of HCI based On-Premise Private Cloud Infrastructure
2. Procurement of GPU enabled Compute Server for AI based workloads training

Scope of Work :

1. Implementation of On-Premise Private Cloud Infrastructure based on Hyper-Converged Infrastructure (HCI)

- The proposed private cloud solution shall be based on Hyper-Converged Infrastructure (HCI). The HCI solution should include unified management and a dashboard for provisioning, automation, and orchestration of resources. The HCI should be based on software-defined storage and controller-based storage with no single point of failure architecture. The HCI solution should support virtualized, containerized, and physical workloads. The offered platform should provide the simplicity of hyper-convergence from a well-known hypervisor platform, along with the required licenses as per the specifications and requirements.
- The cloud architecture should be capable of implementing diverse applications such as computationally intensive web apps, databases, and active directory/LDAP with adequate storage. It should provide sufficient virtualization and application-level isolation.
- The work order includes supply, installation, migration of existing services, training, warranty and technical support services.

Technical Specifications

Number of Computing Nodes		Minimum 3 nos. Physical nodes with minimum Onsite Warranty of 5 years or higher
Sl.No	Item	Specification
1	HCI Suite including Hypervisor, Cloud Management & Orchestration, Virtual Load Balancer, Storage Management	Nutanix OR competitive HCI suite. It must have adequate core licenses upto 7 years with possibility of extending it upto 9 years
2	Processor(s)/ Core(s)	The processor must be of Intel or AMD platform. The total infrastructure core requirement is a minimum of 136 physical cores operating at 2.0 GHz OR a higher number of cores operating at a higher frequency.

3	Memory	The total infrastructure memory requirement is 1024GB or higher with DDR4 DIMMs or higher.
4	High Speed R/W SSD	The total infrastructure SSD requirement is 3.2 TB, SAS SSD, 24 Gbps. Booting Volume shall be NVMe SSD.
5	High Speed R/W HDD	The total infrastructure HDD requirement is 12 TB, SAS HD, 12 Gbps.
6	Storage Controller for each node	RAID Controller, Support RAID Levels, 0,1,5 Etc.
7	Network Ports for each node	2 x Dual Port 10/25Gb Ports (/SFP+ SR)
8	Power Supply	(N+1) Redundant Hot Plug Power Supply with Power Cords
9	Support	5 Year Pro support or higher: Next Business Day onsite Services, support should provide 24x7x365 with min 6 hrs response time.
10	Virtualization certification	Node /Server model should be certified for virtualization.
11	Chassis	Rack Mountable

- **Out of the servers, one or two server chassis should include the option for additional storage bays to allow for storage space upgrades.**
- **All necessary cables/connectors/accessories should be provided for proper installation/deployment of the server**

Network Switch	One High Speed Network Switch with minimum 8 x 25G SFP28 ports. Advanced features such as VLAN support and network security . 1U rack space preferred.
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- **The Bidder must also submit a separate bid for hosting HCI-DR configured on Amazon S3 or any other cost-effective major cloud provider. The proposal should be for a one-year subscription.**

2. Procurement of GPU enabled Compute Server for AI based workloads training

The proposed compute service, with appropriate GPU capabilities, will be used for AI-based workload training. The processor should be able to profile workload characterization effectively. The GPU must support concurrent multi-user workloads and execute tasks efficiently. Users are expected to access the system via SSH sessions or VS Code, with workload execution managed by the SLURM job scheduler. This will be a bare-metal resource directly accessible to the end user, without any HCI integration.

Technical Specifications:

Sl.No	Item	Specification
1	Processor(s)/ Core(s)	AMD EPYC 9454, 48 Cores, 2.75 GHz 256MB Cache OR Intel Xeon Platinum 8558U, 48 Cores, 2GHz, 260 MB Cache
2	Memory	512 GB with DDR4 DIMMs or higher.
3	SSD	1.6 TB (SAS SSD, 24 Gbps)
4	HDD	7.2 TB (SAS HD, 12 Gbps)
5	RAID Controller	Support RAID Levels, 0,1,5 Etc.
6	GPU	2 X NVIDIA Ampere A30, PCIe, 165W, 24GB Passive, Double Wide, Full GPU
7	Network	2 x Dual Port 10/25Gb Ports (/SFP+ SR)
8	Chassis	Rack Mountable
9	Power Supply	(N+1) Redundant Hot Plug Power Supply with Power Cords
10	Support	5 Year Pro support of higher: Next Business Day onsite Services, support should provide 24x7x365 with min 6 hrs response time.
11	Virtualization certification	Node /Server model should be certified for virtualization.

3. General Terms and Conditions

- a. The Bidder should have premium support care service from the respective hardware and software OEM during the warranty period.
- b. All Physical servers should be from same OEM
- c. Offered servers should be compliant for VMware, Nutanix, RHEL and Microsoft for future expandability.
- d. The bidder must submit the product catalogs, literature of the proposed product in solution.
- e. Point by point compliance to all the above mentioned features should be provided by the firm. There should not be any deviation and if any, should be stated clearly

- f. Bidders must mention GST and HSN/SAC codes of all the items quoted
- g. Post-implementation, the scope includes support and implementation of the following activities from time to time:
 - Firmware upgrades
 - Faulty parts replacement
 - Hardware system monitoring
 - Troubleshooting and performance tuning
 - Operating system patches and upgrades
 - Patches and upgrades of supplied software
 - Advisories on software upgrades and vulnerabilities
 - Support during DR drills
 - Any support required to keep systems and software up and running

4. Draft Deployment Architecture

RACK AVAILABLE IN COLLEGE		
1 Slot	HCI Compute Node 1	HCI NODES
2	HCI Compute Node 2	
3	HCI Compute Node 3	
4	HIGH SPEED NETWORK SWITCH	
5	GPU enabled Compute Server	GPU Server
6		

Note :

1. The given configuration represents the minimum technical specifications. We kindly request that the Bidder/OEM submit their tender after obtaining the precise details from RSET and ensuring that the specifications align with the budget requirements.
2. Please note that RSET reserves the right to cancel the bid / modify the bid if necessary.

For pre-bid system study, you may contact

- Jobin Jose - 97475 13115
- Binu A - 9447564867

The tender may be forwarded to : office@rajagiritech.edu.in

with a CC to

itquotations@rajagiritech.edu.in, jobin_jose@rajagiritech.edu.in and sunyalabs@rajagiritech.edu.in.

Last Date : 28 August 2024

PRINCIPAL

7 August 2024