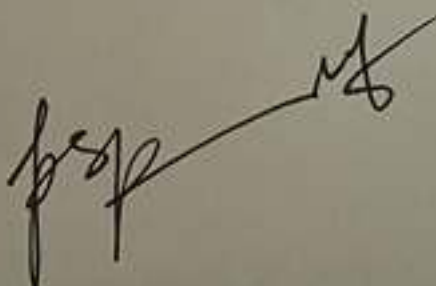


  
 Government of Nepal  
 Ministry of Communication and Information Technology  
 National Information Technology Development Committee  
**National Information Technology Center**  
 Singhadurbar, Kathmandu, Nepal  
 Addendum No. 1  
 2079/09/12 (December 27, 2022)

This is to notify all concerned that Ministry of Communication and Information Technology, National Information Technology Development committee, National Information Technology Center, Singhadurbar, Kathmandu has made the following amendments to the bidding document for the "Supply, Delivery, Installation and Commissioning of HCI, IFB No.: NITC/G/NCB-10/079-80" as per the notice public on 2079/09/03 (December 18, 2022) in "The Kathmandu Post" national daily newspaper and [www.bolpatra.gov.np/egp](http://www.bolpatra.gov.np/egp).

Section V: Schedule of requirement, Point No. 3 Technical Specification, page 72

Subject	Existing Clause	Amendment
<b>CPU</b>	Two (2) numbers of Latest Generation Intel 8 Cores 2.8GHz or higher CPU Per Server	Single Latest Generation Intel 20 Cores 2.3GHz or higher CPU Per Server
<b>Memory</b>	Proposed solution should have at least 384 GB of Memory in a cluster	Proposed solution should have at least 384 GB of Memory in a cluster (scalable to 8TB memory) per node
<b>Total SSD and HDD</b>	Total Usable Capacity 18TB out of which 2TB should be SSD. Should be able to allocate SSD drive for VM data store. If the feature is not available in that case the bidder/OEM must configure ALL FLASH(SSD) drives as internal storage of 18TB of usable capacity after factoring 2 copies/RAID1.	Total Usable Storage capacity 19TB per cluster, 2*1.6TB Cache SSD per node.
<b>OS Boot drive</b>	Server should support two M.2 drives OS Boot Device of 512GB	Server should support two M.2 drives OS Boot Device of 480 GB or higher
<b>Network Interfaces</b>	Server should have following interfaces: 1x1G RJ45 Mgmt. Interface, 2x10G RJ45 Interfaces and 2x25G SFP Interfaces per server	Server should have following interfaces: 1x1G RJ45 Mgmt. Interface, 2x10/25G SFP Interfaces per server including transceiver
<b>Software</b>		
<b>Gartner Analysis</b>	The proposed solution must be Leader in Gartner's latest report for Hyperconverged Infrastructure.	The HCI software solution must be listed in the Gartner's magic quadrant (leaders' section) in the relevant technology field over last 3 years.
<b>Management</b>	The proposed solution shall support inbuilt automation features including playbooks for DevOps environment.	Solution must be able to automate Lifecycle Management of HCI software and firmware/driver for the hardware and also can schedule the upgrade.
		The proposed solution must be had Software Defined Data Center Life- Cycle Management software which automate lifecycle management of all of its component.
		The proposed solution shall provide API's to integrate with other components of the virtualization solution
		The proposed solution must be enterprise grade HCI system which able to deliver 99.9999% (six nines) availability. HCI vendor to propose the





		own Redundancy Factory (RF) to achieve the required availability.
<b>Software Defined Storage</b>	The proposed solution must not depend on a separate Storage Area Network & associated component such as SAN Switches & HBAs. The proposed solution must not be dependent on any proprietary hardware for interconnection or communication. The proposed solution should be hardware agnostic and should support leading OEM's x86 Servers, should not be limited to single OEM.	Solution must support all of the mentioned industry Leading protocols such as NFS, iSCSI & FC. The proposed solution must not depend on a separate Storage Area Network.
	The Proposed storage should maintain primary working set copy of active data on the Local server where VMs are being currently hosted (Data and I/O locality), to provide high IOPS and low latency.	The proposed solution must have software defined storage built into the hypervisor for best efficiency without having to deploy additional modules or software outside of hypervisor code
	The proposed storage should support data tiering feature with Block Level Support for real-time data storage tiering between SSD and HDD disks to maintain optimal performance and any licenses for the same should be incorporated.	The proposed storage should support data tiering feature with Block Level Support for real-time data storage tiering between SSD and HDD disks to maintain optimal performance.
	The proposed storage solution must have De-duplication and Compression features licensed and implemented from day one (Should not have dependency on any proprietary hardware device). Storage Efficiency Features should be available across any type of nodes i.e. All Flash or Hybrid-Mixed Use or Storage Heavy Nodes.	The proposed solution must support either mixture of HDD and SSD or all-flash configuration. The proposed solution must support expansion by adding a single disk (HDD/SSD). The proposed solution must be scalable to 64 nodes per cluster to achieve higher availability with the necessary license supplied day 1.
	The solution should be able to support different generation of Intel processors, different appliance models in the same cluster for investment protection over the life of the proposed solution.	The solution should be able to support homogeneous appliance models in the same cluster for the better performance.
	The proposed solution should have integrated or third-party enterprise grade Https/Http S3 Object Solution with WORM and Versioning feature. It Must be a Distributed solution which can scale out to Peta Bytes. License for 1TB Object Storage should be included in the proposed solution	This clause has been removed
<b>Hypervisor</b>	The solution should deliver zero data loss in case of disk, node, or network failure. The HCI platform should have ability to replicate VM's independently & irrespective of the Hypervisor software.	The solution should deliver zero data loss in case of disk, node, or network failure. The HCI platform should have ability to replicate VM's independently.
	The proposed solution should provide continuous availability of any application in the event of a hardware failure— with no data loss or downtime. For workloads up to 8-vCPU.	The proposed solution must support fault tolerance capability in case of disastrous situations including host failures (up to 2 vcpu)

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		The proposed solution must provide local and remote protection of virtualization platform with minimum 15 VMs.
<b>TOR Switch</b>	24 port 1000 Base-T, 6 x 25G SFP, Dual Core, 4GB system memory, all ports activated from day 1st, 1G management port, Dual Power supply, 380Gbps minimum throughput	The switch hardware platform shall provide the following minimum configuration: - 28 ports 10GbE SFP+ and 2 ports 100GbE enabled with full SFP+ transceivers and 100GbE DAC for HA. The switch hardware platform shall be able to deliver at least 960 Gbps of total switching capacity and forwarding capacity of no less than 720 Mpps.
<b>Warranty</b>	Bidders must propose the Hardware and Software with 1-year comprehensive onsite warranty and proactive maintenance support form OEM	Bidders must propose the Hardware and Software with 3-year comprehensive onsite warranty and proactive maintenance support form OEM

Section II: Bid data sheet, ITB 19.2, page 37

Existing clause	Amendment
A Manufacturer's Authorization letter is required for all the items listed in Section V Schedule of Requirements.	Tender must attach original manufacturer's authorization letter and one copy directly email to Customer from OEM for all the items listed in section V Schedule of requirement

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