



Republic of the Philippines
Tourism Infrastructure & Enterprise Zone Authority

Supply, Delivery, and Installation of Server

TERMS OF REFERENCE

CATEGORY	DESCRIPTION
HARDWARE REQUIREMENTS	
a. Node size	<ul style="list-style-type: none"> Maximum of 2U per node
b. Number of Nodes	<ul style="list-style-type: none"> Minimum of three (3) nodes
c. Processor	<ul style="list-style-type: none"> At least 2x Intel Xeon Silver 4314 2.4GHz or higher per node At least 16 cores/32threads per processor At least 128G (32G*4) memory per node
d. Storage	<ul style="list-style-type: none"> At least 4 X 4TB HDD SATA per node At least 2 X 960GB SSD SATA for caching per node
e. Network ports per Node	<ul style="list-style-type: none"> At least four (4) 1000Base-T and two (2) 10Gb SFP+ Multimode ports per node
f. Power supply	<ul style="list-style-type: none"> At least 2 X redundant power supply per node
Requirements	
Technology	Must include at least virtualized computing (hypervisor), virtualized SAN (software-defined storage), and virtualized networking (software-defined networking).
	Vendor must have a local managed cloud services that can be used for back up as a service for offsite backup copy and recovery or disaster recovery as a service for site failure for single point of contact and not relying on a 3rd party software.
	HCI Software and Hardware must be coming from the same vendor to achieve Single point of contact in the HCI Technology
	HCI Software must be license based on the number of physical processors.
	The crucial components for virtualization of compute, storage, networking, network functions, application firewall, application delivery controller, are provided by the same vendor, to ensure scalability and compatibility
	Must support correlated security service with intelligent threat detection and response platform to automatically take actions (such as quarantine VM by distributed firewall, take snapshot for VM) against malicious activities that are detected by the security platform.



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Compute	The management platform must be integrated and distributed, not relying on a certain virtual machine or physical machine.
	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
	Must have HA (High-Availability). In case the host fails, all the VMs running on that host can be recovered to another host in the cluster for business continuity.
	Must have built-in backup and module activated disaster recovery function that is not relying on any 3rd party backup software to minimize cost and to have a single point of contact.
	Support atleast 2 data copies in hosts to tolerate failure of any 2 disks or 1 host
	Must have snapshot consistent group and scheduled snapshots, administrators can restore virtual machine image data to any snapshot point in time.
	Must be able to evaluate performance of virtual machines and hot-add resources (vCPU and vRAM) when they are running out of CPU or memory, when set threshold has meet to minimize VM failure.
	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.
	Provide virtual machine deletion, power on and off, suspend and resume, restart, shutdown, power off, clone, migration, backup, template export, snapshot, label management and other functions on the hyper-converged management platform interface, and support batch operations.
Storage	Proposed solution must be able to create a virtual storage from the disk installed in the server/node to provide higher protection than usual server/node raid protection.
	Support disk bad sector prediction, scanning and repair to maximize data security
	Support storage capacity prediction based on historical usage statistics and consumption behavior so administrator can proactively plan the additional resources to purchase in advance.
	Support disk remaining life cycle prediction so administrator can proactively plan the additional resources to purchase in advance.
	Supports striping based on disk
	Support data compression and encryption in the replication
	Supports System Diagnostic Console
	Must support plugging in an external drive to copy VM data to easily do migration.
Network	Must be capable of module activated for network virtual security (Virtual Firewall, Bandwidth Manager, SSL VPN, Network Detection & Response (NDR), network virtual security must be provided by the same vendor to achieve single point of contact.
	Natively support deploying virtual routers, virtual switches and firewalls.
	Must have distributed firewall to offer micro-segmentation of VMs.



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Network	Must be capable of module activated for network virtual security (Virtual Firewall, Bandwidth Manager, SSL VPN, Network Detection & Response (NDR), network virtual security must be provided by the same vendor to achieve single point of contact.
	Natively support deploying virtual routers, virtual switches and firewalls.
	Must have distributed firewall to offer micro-segmentation of VMs.
	The virtual router supports high availability. A failed virtual router can be automatically recovered upon host failure, to ensure high availability of routing service
	Must have a drag and drop network configuration user interface in the management portal to easily configure and visualize the network
	Must have hypervisor-embedded web protection daemon.
1.Certification	In order to ensure the maturity of Hyper-converged Infrastructure solution, the vendor must be CMMI L5 certified.
	ISO 9001:2015
	ISO/IEC 27001
	ISO 14001
	ISO/IEC 20000
2.Project Implementation	The supplier should be certified reseller and partner.
	The supplier must provide a solution that is branded and brand new. The solution must be from a reputable international brand with local presence and local depot of parts and supplies.
	The supplier shall perform the supply, delivery, installation, configuration, fine-tuning and testing of System.
	The supplier shall perform the necessary fine-tuning, upgrade, redesign or replacement of appliance to ensure the optimum performance of the System.
3.Warranty and support	At least three(3) years for the hardware and software components of the project, which includes the quarterly preventive maintenance service.




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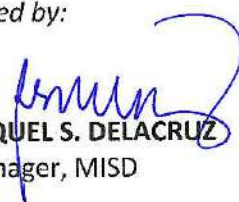
ESTIMATED PROJECT COST

Approved Budget for the Contract (ABC) is **SEVEN MILLION SEVEN HUNDRED THOUSAND TWENTY PESOS ONLY (P 7,720,000.00)**


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