



सिडिएस एण्ड क्लियरिङ लिमिटेड
(नेपाल सरकारको स्वामित्व भएको)
CDS and Clearing Limited
(An Undertaking of Government of Nepal)

पत्र संख्या : २०८३-८४-११

चलानी नं. : ०१

मिति : २०८३/०४/०१

बिषय : अनुमानित लागत उपलब्ध गराउने सम्बन्धमा ।

श्री सम्पूर्ण सेवा प्रदायक कम्पनीहरु,

यस लि. को २ (दुई) थान स्टोरेज खरिदका लागि लागत अनुमान गर्नुपर्ने भएकोले सो प्रयोजनको लागि संलग्न बमोजीमको Specification अनुसारको स्टोरेजको अनुमानित लागत (Cost Estimation) सात दिनभित्र उपलब्ध गराउनुहुन सम्बन्धित सबै बिक्रेतामा अनुरोध छ ।

भवदीय,

सुकीर्ति सुवेदी

अधिकृत-प्रशासन तथा जनशक्ति महाशाखा

Storage Requirement for DC

Brand	To be mentioned by supplier
Model	To be mentioned by supplier
Form Factor	Rack mountable
Recognition	Proposed Storage should be from the provider which is being listed as a Leader in Gartner's magic quadrant for Enterprise Storage in its latest Report.
Hardware Redundant	Redundant hardware components for high availability. Should have Dual Redundant hot pluggable controllers and Power supplies, Fans, Management ports, Network Connectors etc.
RAID Options	Must have RAID (1/0, 5, 6) options Or Similar Disk protection features
Processor	The storage must have 2 controllers in active-active configuration. Each of the controller must be configured with atleast Physical 32 Core.
Architecture	LUNs should not be tied to any specific controller, and there must be I/O paths connecting the hosts to each controller. This parameter should be provided in the Data Sheet/Whitepaper
Storage Management	Easy to use GUI based or web enabled administration interface for configuration storage management. Storage management alerting and reporting tools also should be bundled with the storage.
High Availability and Disaster Recovery	Should have Dual Active / Active controller, should provide proven architecture that delivers 99.9999% availability. Should come with the license of DC-DR sync and Async replication for business continuity Disaster recover
Cache memory	Should provide minimum 128 GB cache memory for each controller having total of 256 GB. It should come with minimum 100 TB or Higher Capacity of Usable Space of Nvme Storage(TLC Based). The 100TB Usable capacity should be calculated after RAID 6.
Storage capacity and performance	Should be a unified storage supporting file protocol NFS, CIFS /SMB, Block Protocol FC, iSCSI, NVMe, necessary license should be included from day 1. with out using any additional gateway Proposed storage should provide at least 400K IOPS from Day 1 with 80:20 Read Write and 4KB or Higher block size with not more than 1 millisecond latency. Bidder must attached sizing / configuration document provided by OEM and must perform IO Meter test during PDI
Connectivity	The proposed solution should allow scaling by adding additional nodes for more storage and performance. The system should be able to manage all the nodes as one. Additional slots for expanding the solution to additional 100TB of usable space should be provided from day 1. Any additional nodes/chassis should be configured with the solution. Should have unified fully redundant I/O ports that must support combination of FC / iSCSI ports. Connectivity must have automated I/O path failover, Automatic load balancing and path connectivity monitoring features. We should provide minimum 8 x 10 or 25Gbps iSCSI with required Cable, and 8 x 32 Gbps FC(should be back ward compatible with 16G FC) with cables and SFPs.

Storage Requirement for DC

Features Must Available	Cyber-vault capability that combines encryption, immutable backups, and air- gapped storage. Proposed storage should also have WORM features used to protect data from modification or deletion after the data is written once. Storage should also support Data at Rest and Data on fly encryption should support SIEM/ XDR integrations. Deduplication and compression features for storage efficiency Asynchronous mirroring for Volume replication of long distance to remote site mirroring. Should come with highest level of security and compliance compatibility for sensitive data. Should have a feature of multi-admin verification before executing sensitive commands must have Multifactor admin access functions. The proposed solution should be quoted with 5 years support from OEM and 24x7 TAC Support along with license for all the above-mentioned features
Warranty and Support	The bidder should provide required Hands-on training for the Configuration, Operation and Management of the Product supplied. The bidder should complete the Migration of the Data from the existing Storage system to the Supplied System. The bidder should submit the proper migration plan to CDSC before installation & Commission of the system. The product shall be in active production and guaranteed not to reach End of Sale status for a minimum of five years. The bidder shall provide local support for configuration, tuning, and troubleshooting of the Storage System as required by CDSC. The bidder must allocate a minimum of two (2) System Administrators for support. Support personnel must be remotely available on a 24x7 basis as required by CDSC. The bidder shall conduct regular reviews of the Storage configuration and policy and provide monthly reports. The bidder shall proactively provide recommendations based on current cybersecurity threats and prepare an action plan to mitigate such threats.
Manufacturer Authorization letter/Form	Must provide manufacturer authorization letter/form Original Equipment Manufacturer (OEM)- it should be directly emailed to the CDSC's official email(info@cdsc.com.np)

Storage Requirement for DR

Brand	To be mentioned by supplier
Model	To be mentioned by supplier
Form Factor	Rack mountable
Recognition	Proposed Storage should be from the provider which is being listed as a Leader in Gartner's magic quadrant for Enterprise Storage in its latest Report.
Hardware Redundant	Redundant hardware components for high availability. Should have Dual Redundant hot pluggable controllers and Power supplies, Fans, Management ports, Network Connectors etc.
RAID Options	Must have RAID (1/0, 5, 6) options Or Similar Disk protection features
Processor	The storage must have 2 controllers in active-active configuration.
Architecture	Each of the controller must be configured with atleast Physical 32 Core. LUNs should not be tied to any specific controller, and there must be I/O paths connecting the hosts to each controller. This parameter should be provided in the Data Sheet/Whitepaper
Storage Management	Easy to use GUI based or web enabled administration interface for configuration storage management. Storage management alerting and reporting tools also should be bundled with the storage.
High Availability and Disaster recovery	Should have Dual Active / Active controller, should provide proven architecture that delivers 99.9999% availability. Should come with the license of DC-DR sync and Async replication for business continuity Disaster recover
Cache memory	Should provide minimum 128 GB cache memory for each controller having total of 256 GB. It should come with minimum 100 TB or Higher Capacity of Usable Space of SAS SSD or Higher Technology Storage. The 100TB Usable capacity should be calculated after RAID 6.
Storage capacity and performance	Should be a unified storage supporting file protocol NFS, CIFS /SMB, Block Protocol FC, iSCSI, NVMe, necessary license should be included from day 1. with out using any additional gateway Proposed storage should provide at least 400K IOPS from Day 1 with 80:20 Read Write and 4KB or Higher block size with not more than 1 millisecond latency. Bidder must attached sizing / configuration document provided by OEM and must perform IO Meter test during PDI
Connectivity	The proposed solution should allow scaling by adding additional nodes for more storage and performance. The system should be able to manage all the nodes as one. Additional slots for expanding the solution to additional 100TB of usable space should be provided from day 1. Any additional nodes/chassis should be configured with the solution. Should have unified fully redundant I/O ports that must support combination of FC / iSCSI ports. Connectivity must have automated I/O path failover, Automatic load balancing and path connectivity monitoring features. We should provide minimum 8 x 10 or 25Gbps iSCSI with required Cable, and 8 x 32 Gbps FC with cables and SFPs.

Storage Requirement for DR

Features Must Available	Cyber-vault capability that combines encryption, immutable backups, and air-gapped storage. Proposed storage should also have WORM features used to protect data from modification or deletion after the data is written once.
	Storage should also support Data at Rest and Data on fly encryption should support SIEM/ XDR integrations.
	Deduplication and compression features for storage efficiency
	Asynchronous mirroring for Volume replication of long distance to remote site mirroring.
	Should come with highest level of security and compliance compatibility for sensitive data. Should have a feature of multi-admin verification before executing sensitive commands must have Multifactor admin access functions.
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	The bidder shall provide local support for configuration, tuning, and troubleshooting of the Storage System as required by CDSC. The bidder must allocate a minimum of two (2) System Administrators for support. Support personnel must be remotely available on a 24x7 basis as required by CDSC.
Manufacturer Authorization Letter/Form	The bidder shall conduct regular reviews of the Storage configuration and policy and provide monthly reports. The bidder shall proactively provide recommendations based on current cybersecurity threats and prepare an action plan to mitigate such threats.
	Must provide manufacturer authorization letter/form Original Equipment Manufacturer (OEM)- it should be directly emailed to the CDSC's official email(info@cdsc.com.np)

