COMMUNICATIONS AUTHORITY OF KENYA

Ref: CA/SCM/OT/52/2024-2025.

29th May 2025

Addendum No. 1

To All Bidders,

RE-TENDER FOR SUPPLY, DELIVERY, INSTALLATION AND CONFIGURATION OF A UNIFIED STORAGE SYSTEM- CA/SCM/OT/52/2024-2025

Please refer to the above-mentioned tender that appeared in MY GOV on 20th May 2025.

Pursuant to clause 10.1 of the tender document uploaded to our website, and the Public Procurement Information Portal, the Authority wishes to respond to the clarification sought by some of the prospective bidders as follows:

No.	Requirements	Clarification Sought	CA Response
1.	Large NAS Pools: Must support large NAS pools/filesystems (20PB, 400 billion files/inodes)	For NAS pools, the 20PB and 400 billion files is too little for the required storage, You may require at least 30PB and 800 Billion files? https://www.netapp.com/media/12385-tr4571.pdf	*These are minimum requirements and bidders are invited to propose higher memory configurations.*
2.	Maximum NVME SSDs: 72 drives across 2 nodes, 2.21 Petabytes capacity or higher.	Is this the raw capacity or useable capacity?	*Bidders are required to specify both raw and usable capacities in their submissions, including RAID overhead and any hot spares.*
3.	Support for Heterogenous clusters: Must support creation of heterogenous clusters combining the existing FAS8200 storage system with the new NVME based storage system. The mixed clusters must support scalability of up to 24 NAS nodes or 12 SAN nodes in once common Storage cluster.	This requirement only works if you have only NETAPP in your environment. Do you have other vendors in your environment? How does this requirement apply to those?	*The Authority intends to upgrade its existing infrastructure by way of maintaining the existing solution and architecture already in use. The Authority maintains its minimum specification.*
4.	Processor & Memory required: At least 20 Cores per HA pair of controllers	The 128Gb minimum memory for the storage requested is too low and will become a performance bottleneck. Other vendors like HP, Dell, Huawei provide higher memory requirement	*The Authority intends to upgrade its infrastructure while maintaining the existing solution and architecture. Bidders may*

		at similar cost value. This looks like an inferior requirement tied to a specific vendor when the market can offer better at cheaper?	*propose higher specifications if they offer added value and remain fully compatible with the current environment. The Authority maintains its minimum specification.*
	128 GB minimum memory NVRAM: 16GB NVDIMM/NVRAM At least 8 I/O expansion slots.		
5.	The system must support the following modern storage innovations: Integrated compression offload engine with Intel® Quick Assist Technology (QAT)- the CPU architecture must provide increased performance for resource- intensive tasks and processing Temperature Sensitive Storage Efficiency (TSSE) - Always-on enhanced storage efficiency without impacting performance DDR5 Memory PCIe Gen 5 I/O slots. Ready for IPsec/TLS offload Titanium power supplies to maximize energy efficiency.	Intel offload engine is specific to vendors using intel CPU, Can other vendors provide equivalent as per their CPU architecture as long as the performance is equal or higher?	*The current setup uses Intel-based systems with validated offload performance. To ensure consistency, compatibility, and minimize integration risks, the upgrade will prioritize retaining Intel-based offload engines. The Authority maintains its minimum specification.*
6.	Configured Capacity – Primary Site: Unified storage systems with the following capacity are required. Bidders to explicitly indicate the raw & usable capacity they would provide. The organization requires the capacity below on the production site. **Raw Capacity: 214TB raw storage capacity.** **Usable capacity required: 145 TBs**	The QLC performance is majorly targeted to read intensive applications and may not meet the required scenario. **Suggest to support TLC which can be provided by all storage vendors as well.**	*The Authority aims to update its infrastructure while maintaining the current solution. The Authority maintains its minimum specification.*

		usable space on QLC NVME Self Encrypting (SED) drives		
		This should be achieved using a RAID setup that protects the organization's aggregates from **a minimum of at least two disk drive failures per aggregate**.		
		Additionally, each storage aggregate **must keep a hot spare disk** to protect the authority from downtime due to disk drive failures. The hot spare must not be counted towards usable space requirement.		
		Bidders indicate the capacity of storage that they will offer under responses. **Bidders that propose 145TB as effective capacity will be disqualified.**		
7.	Protocols supported: The system must support NFSv4/RDMA, NVMe/TCP, NVMe/FC, FC, iSCSI, NFS, pNFS, CIFS/SMB, Amazon S3.	**pNFS** protocol is locked to NetApp https://www.netapp.com/media/1976 1-tr-4063.pdf This is vendor specific which will render other vendors not eligible to participate.	*The Authority plans to update its infrastructure while maintaining its current architecture. pNFS is specified to ensure compatibility and continuity. Equivalent solutions may be proposed if they are fully interoperable and meet all performance and functional requirements listed in the minimum requirements. The Authority maintains its minimum specification.*
8.	Security Certifications: Storage solution MUST have below global security certifications: DoDIN Approved Products List.	The specified certifications such as FIPS 140-2, DoDIN, FedRAMP, NSA are all USA government certifications. **Is this supposed to lock out other vendors?** **Please consider whole industry**	*The Authority seeks to upgrade its infrastructure while retaining the current architecture. Listed certifications are relevant to the implementation, ensure*

	AES-256 Compliant Common Criteria security certification FedRAMP Certification FIPS 140-2 Validated storage – Level 1 & 2 NIST Certified NSA Certified storage system Listed on Commercial Solutions for Classified (CSfC) Component List.	recognized storage certifications? https://www.netapp.com/esg/trust-center/compliance/netapp-compliance-offerings/	*global security and compliance to uphold high security assurance standards. The Authority maintains its minimum specification.*
9.	Protocols required: Must support unified access of data through Storage protocols supported: **NVMe/TCP, NVMe/FC, FC, iSCSI, NFS, pNFS, CIFS/SMB & Amazon S3 object protocols.** The storage system must support serving all protocols without requiring an external appliance.	**pNFS protocol** is a NetApp native protocol, is the solution required only Netapp, other vendors have equivalent with better performance at similar cost level. **pNFS has been used to lock out other vendors? Why is this an open tender?** https://www.netapp.com/media/19761-tr-4063.pdf	*The Authority plans to update its infrastructure while maintaining its current architecture. pNFS is specified to ensure compatibility and continuity. Equivalent solutions may be proposed if they are fully interoperable and meet all performance and functional requirements listed in the minimum requirements. The Authority maintains its minimum specification.*
10.	Flexible Raid Setup: Must have the option to support triple disk failure protection for large disk drives.	Does the protection for triple parity only apply to large disks? What happens in the future when other disk types are integrated? https://community.netapp.com/t5/ONTAP-Hardware/Raid-group/td-p/134398	*The Authority plans to upgrade its infrastructure while maintaining the current solution. Triple parity supports existing large-capacity disks, with flexible configurations available to ensure ongoing data protection and compatibility with future disk types. The Authority maintains its minimum specification.*
11.	Hybrid configs support: Storage must have the capability to mix SSD sizes within a system/controller/cluster Additionally, the storage must support horizontal	The industry is implementing all flash. The requested HDD is **outdated technology, consume more energy and are less efficient** at a cost value similar to the advanced all flash disks. **Does requiring HDD instead of all flash provide the Authority with value**	*The Authority plans to upgrade its infrastructure while maintaining the current hybrid storage architecture, which balances performance and capacity. All-flash alternatives may be*

	cluster scale and intermixing of models with controllers that use SAS, SATA, SSD, NVME SSD drives whilst maintaining all controllers within one scale-out storage cluster.	**for money?** https://www.gartner.com/en/docume nts/5647323	*proposed if they offer proven performance, cost benefits, and compatibility with the existing scale-out cluster using mixed drive types and controllers. The Authority maintains its minimum specification.*
12.	Scale-out configs: The system must support scale-out from 2 to 24 nodes/controllers (12 HA pairs) in a single storage cluster for the same protocol (i.e., cannot be shared like x FC node and y NAS node).	Does this requirement apply to both the new and existing **NetApp** storage as defined in subsequent specs?	*The requirement applies to both new and existing architecture to ensure consistency, compatibility, and unified management across the storage environment. The Authority maintains its minimum specification.*
13.	The OEM must be a Veeam Integrated Alliance Partner: The **Veeam Alliance Technical Programs** portfolio supports Veeam's Alliance Program (VAP) partners in their technical journey with Veeam – from simple access to APIs, to compatibility testing with standardized test plans, through deep and customized integrations into the Veeam software. Bidder must provide evidence of their OEM being an Integrated to Veeam Platform Alliance Partner solutions verified and quality tested OEM. The certification must be held for below Veeam products:	**Veeam Alliance is a program that Veeam has with certain vendors like NetApp.** **The requirement locks the storage to pre-identified** providers and serves NO compatibility or integration requirement. https://www.veeam.com/partners/alli ance-partner-technical-programs.html	*This specification aims to ensure reliable support for mission-critical systems. Bidders who meet the specified requirement are invited to submit a proposal. The Authority maintains its minimum specification.*

	Veeam Backup & Replication 12 Veeam Agent *for Microsoft Windows* 6.0 Veeam Recovery Orchestrator 6.0 **Supported features and attributes must include:** Storage Snapshot Integration Backup Target - Disk FC Backup Target - Disk ISCSI Backup Target - Disk NFS Backup Target - Disk SMB On-Demand Sandbox for Storage Snapshots Restore workflows for storage snapshots - FC, Iscsi & NFS.		
14.	Warranty on SSDs: The storage system must provide a support warranty that includes SSD wearing in case of degrading quality of SSD drives. (replace it under warranty even for up to 6 years).	The required support is 3 years for the storage? Does this mean provided warranty for the disks is separate?	*The 6-year SSD wear-level warranty must be included separately from standard support. This ensures long-term reliability for write-intensive workloads.*
15.	NFS: NFS to support versions 3, 4, 4.1 including pNFS.	**pNFS is vendor locked to NetApp.** Please open the specifications to support other vendors in the spirit of Open Tender. https://www.netapp.com/media/19761-tr-4063.pdf	*The Authority plans to update its infrastructure while maintaining its current architecture. pNFS is specified to ensure compatibility and continuity. Equivalent solutions may be proposed if they are fully interoperable and meet all performance and functional requirements listed in the minimum requirements. The Authority maintains its minimum specification.*

16.	Data Compression in transit: The solution must support network compression for replication to enable low RPOs.	Most vendors define this as link compression. Please use vendor generic language.	*The Authority aims to update its infrastructure while maintaining the current solution. The Authority maintains its minimum specification.*
17.	The vendor must provide a solution for Logical air gapping of data: The logical airgap must enable isolation of the data plane without silos. Bidders will be expected to create isolated storage systems that are logically separated from all other COMMUNICATION AUTHORITY networks and systems.	The logical Airgap needed should be created in the new storage or across the existing storage?	*The logical airgap must be provisioned in the new storage system, but must also support integration or coordination with existing systems where necessary. The focus is on logical isolation within the production environment for cyber resilience.*

ALL other conditions of the initial letter remain unchanged.

Yours Faithfully,

Peter Mwangi
FOR: DIRECTOR GENERAL