

National Centre for Sustainable Coastal Management
Ministry of Environment, Forest & Climate Change, Govt. of India
Anna University Campus, Chennai - 600025


Request for Expression of Interest (REOI)
for
Providing Latest Technical Specifications for Unified Storage System

Eol No.NCSCM/PROC/2024/IT-UNIFIEDSTORAGE

25/11/2024

1. National Centre for Sustainable Coastal Management (NCSCM) is an institution under the Ministry of Environment, Forest and Climate Change, Government of India, being located at Anna University Campus, Chennai-600025. NCSCM is involved in various scientific research activities.
2. NCSCM intends to procure Unified Storage Systems with latest available technologies.
3. The objective of this Expression of Interest (Eol) is to invite the OEMs or their authorized Representatives to provide the latest technical specifications for Unified Storage System.
4. NCSCM now invites the interested OEMs of the Unified Storage System or their authorized Representatives to provide the latest technical specifications for Unified Storage System along with the brochures, past supply details such as names & addresses with contact nos. of the Purchasers, dates of supplies, quantities of supplies, etc. and annual financial turnover for the last three financial years i.e. 2020-21 to 2022-23.
5. MSEs and Start Ups are also encouraged to participate.
6. The Eols must reach the below mentioned address by **not later than 3 P.M. of 20 December 2024** -

The Director
National Centre for Sustainable Coastal Management,
Anna University Campus, Chennai-600025, Tamil Nadu
E-Mail: procurement@ncscm.org, Website: www.ncscm.res.in

 23/11/2024

Director, NCSCM



Specification of Unified Storage			Compliance
S No.	Component	Description	Yes/No
1	Type of Storage System	Storage Array should be unified storage with a single microcode / Operating system. Proposed Storage shall be the latest generation storage from the respective OEM. Native support for SSD, SAS , NL-SAS drive support.	
2	Storage Processors	Array shall be configured with minimum 32 Core CPU with 1.8 GHz or Higher across controllers.	
		Each Controller should have atleast 2 CPUs for higher reliability availability and serviceability	
4	Availability	The system shall have Fully Redundant & Hot Swappable Fans & Power Supplies. There shall have support for Non-Disruptive Microcode Update & Non- Disruptive Parts Replacement	
5	Licenses	Storage Array should be proposed with licenses for the entire capacity supported by the array from day1 for features such as Thin provisioning, NAS Quota Management, Anti-Virus integration for NAS, Point in time snapshot and restore, Sync and Async Replication for both Block and File Protocols, Data at Rest Encryption.	
6	Encryption	Storage shall be supplied with required hardware and software like license, key manager as required to enable Data at Rest Encryption for entire capacity from day one.	
7	Ports	Storage System should be supplied with below configuration across controllers:- a. 8 x 16Gbps FC optical Ports b. 8 x 10 Gbps Ports SFP+	
8	Drive Support	Proposed array shall support SSD, SAS and NL-SAS in the same chassis and support minimum 600+disk drives with same controller pair.	
	Usable Capacity	The array should be supplied with 200TB usable capacity , with minimum 40TBu on SSD drive of max 4TB capacity in RAID5 and minimum 1600TBu Capacity using NL-SAS drives of 12TB capacity in RAID6 . Distributed hotspare of 1 drive capacity per 30 disks to be configured.	
9	RAID Functionality	Storage should have RAID levels support for RAID 1, 5 & 6	
10	GUI Application	Storage management software should be configured with HTML5 based graphical user interface and it should be configured with single interface for managing all BLOCK and NAS Protocols. The storage management software should display graphical depiction of storage hardware components with capability of tracking system and state information in real time in order to simplify debugging of hardware faults.	
11	NAS File System	Storage must support 64 bit file system and allow creating large single file system of at least 256TB in size. It should support integration with LDAP and AD. Array shall be able to use file protocols like CIFS/NFS for entire supported Capacity of the array or minimum 1PB capacity	
	vVOLs support	The proposed array must support vVOL2.0 or latest with IP multi tenancy functionality from day 1	
	Data at Rest Encryption	The proposed array must support controller based encryption with self managed keys from day 1.	
	File Retention	The array must be supplied with File Retention feature (WORM) from day 1.	
12	Snapshots	SAN should support minimum 256 snapshots per LUN/File System.	
13	System Cache Memory	Proposed storage shall have active-active controllers with minimum 192GB primary balanced DRAM cache memory architecture. The storage controllers must be of at least 48 CPU Cores.	

14	Hosts	The storage shall be support current versions of Linux, Windows, VMware etc. with distributed sparing for faster rebuild of RAID	
15	Protocol Support	The storage shall support FC Protocol, iSCSI, NFS, CIFS, SMB	
16	Storage Functionality	The storage system shall support advanced virtualization capabilities of combining storage from multiple RAID groups into a single pool and provision volumes from these pool. The Storage System shall have the ability to expand LUNS and Pools non-disruptively.	
17	Replication Software	The Storage System shall support Synchronous & Asynchronous Replication for both Block and File Protocols. The proposed replication software must provide the ability to perform DR tests without actually failing over the Production volumes for block capacity. During these drills/tests the Production volumes must be unaffected and should continue their normal operations. Required license for Asynchronous replication to be included along with required accessories/ports.	
18	Quality of Service	The Storage should have the capability to provide Quality of Service (QoS) feature to limit IOPS and Throughput for test/dev hosts so that they do not use beyond permitted resources.	
19	Cloud Analytics	Storage OEM shall provide software-as-a-service cloud management dashboard that provides Basic performance characteristics like IOPS, Throughput, configuration related analytics and Storage health reporting for trending analysis	
20	Magic Quadrant Leader	The proposed storage system should be from OEM's with leaders in Magic Quadrant for atleast last 3 years. Also, the OEM's must have presence in India for last 5 years with support facilities across India.	
21	Support	The Storage array must proposed with 5 years of OEM support.	