

**Request for Proposal (RFP)**

**for**

**Augmentation of  
NetApp Storage  
Solution**

**Space Applications Centre  
Indian Space Research Organization (ISRO)  
Ahmedabad**

## Table of Contents

### Contents

1.	Introduction.....	3
2.	Proposed Architecture.....	3
3.	Technical Specifications: .....	4
4.	Supply, Installation, Operationalization and Warranty Support .....	4
5.	Site Related .....	8
6.	Documents .....	8
7.	Checklist .....	8
8.	Bidding Model .....	9
	Annexure – 1: Layout of Existing NetApp Storage Diagram.....	10
	Annexure – 2: Proposed Augmentation of NetApp storage solution.....	11
	Annexure – 3: Bill of Materials .....	12

## 1. Introduction

ITID has a NetApp FAS 8040 storage solution with 600 TB raw capacity through which ITID is providing Storage as a Service (STaaS) to users for their critical data needs. Presently, this storage solution is being utilized as part of the centralized infrastructure and is utilized to its fullest capacities. Considering the current and future requirements of ITID as well as for the central facility, there is an urgent need for upgradation of this storage solution.

This is RFP document for the Augmentation of the existing NetApp storage solution with additional 2 PB usable disk space to cater to current and future requirements.

As part of this Augmentation, the existing NetApp FAS 8040 storage solution needs to be upgraded without affecting the current data. The Vendor/OEM who supplies the new infrastructure will be responsible for maintaining the integrity of the current datasets.

## 2. Proposed Architecture

The proposed architecture for the 2PB usable storage should be as follows:

- **NL-SAS storage:** Total Usable capacity = 1700 TB additional Usable Capacity upgrade on NetApp FAS 8040 Storage solution using NL-SAS drives with minimum 1.4GBps throughput for 50% Sequential Read and 50 % Sequential Write to be configured with triple parity.
- **NetApp NL-SAS storage:** 126 Qty of NetApp 22 TB (minimum disk size) NL-SAS HDDs
- **NVMe-SSD Storage:** Total Usable capacity = 300 TB additional Usable Capacity upgrade on NetApp FAS 8040 Storage solution using NVMe SSDs for dataprocessing with minimum 13GBps throughput for 50% Sequential Read and 50% Sequential Write to be configured with triple parity.
- **NetApp NVMe-SSD storage:** 30 Qty of NetApp 15.3TB (minimum disk size) NVMe SSD's.

All necessary Disk-enclosures, cables, network switch, fiber module and connectors for above NetApp Storage solution from existing controllers to new controllers shall be provided.

### 3. Technical Specifications:

These specifications are for augmentation of existing NetApp FAS8040 storage solution. The below specification is the minimum requirement. **OEM/Vendor may configure higher than these specifications.**

Sr. No.	Item	Description	Quantity	Total Usable Capacity	Compliance (Yes/No)
1.	NetApp NL-SASdisk	Raw capacity: 22TB (minimum)	126 drives	1700 TB	
2.	NetApp NVMe-SSD Disk	Raw capacity: 15.3 TB (minimum)	30 drives	300 TB	

#### Throughput:

1. NL-SAS: minimum 1.4GBps for 50% Sequential Read and 50 % Sequential Write.
2. For NVMe-SSD minimum 13.0GBps for 50% Sequential Read and 50 % SequentialWrite

### 4. Supply, Installation, Operationalization and Warranty Support

Sl. No.	Requirements	Details	Compliance from Vendor (Yes/No)
	<b>Completeness</b>	<p>Offer must be for the <b>NetApp Storage Volume Expansion</b> (NL-SAS drives and NVMe-SSD drives, Installation, integration and operationalization into user network and provide warranty support for 3years)</p> <p>The vendor should make the system operational as provided in architecture diagram (<b>Annexure 2</b>) within . Any accessories required to make the system operational shall be included as part of the bid.</p> <p><b>Part supply offers will not be considered.</b></p>	

	<b>Integrity of existing data and management of augmented solution</b>	<ol style="list-style-type: none"> <li>1. Vendor should install and integrate the supplied NetApp HDDs in our existing NetApp FAS Storage solution. The integrity of existing datasets on current storage shall be ensured. The new and existing storage capacity shall be managed as single entity.</li> <li>2. Data migration, if required, shall be the responsibility of the vendor. Entire existing hardware shall be integrated with new hardware, if required, upgrade of the devices shall be provided for integration at no extra cost, even if it includes extra storage, new controllers, advance version of existing controller, cable and accessories. No extra payment will be made and integration shall be sole responsibility of bidders</li> </ol>	
	<b>OEM &amp; Vendor Qualification Criteria</b>	<ol style="list-style-type: none"> <li>1. Storage OEM should have sales and support office in India.</li> <li>2. <b>As on bid date, Vendor and OEM must not be blacklisted at any Government Organization in India. Vendor and OEM shall provide self-certification documents for the same.</b></li> <li>3. <b>Vendor should have supplied and installed a similar storage solution with capacity of at least 200 TB. Documentary proof for the same shall be provided.</b></li> </ol>	

	<b>Warranty &amp; Technical Support</b>	<ol style="list-style-type: none"> <li>1. After upgradation, the entire storage system should have a warranty of 3 years. In case of any issues with any component of the total storage solution, the problem shall be resolved within 24 hours of reporting.</li> <li>2. 3 Years Comprehensive Onsite warranty with advance part/disk replacement on 24 X 7 basis, with maximum 4Hr. Response time.</li> <li>3. Onsite operation, maintenance and administration support should be provided by an expert engineer during warranty period.</li> <li>4. As per ISRO policy, remote access through Internet will not be permitted to the storage connected on Intranet.</li> <li>5. All software and firmware upgrades shall be ensured during warranty period.</li> </ol>	
	<b>Downtime Compensation</b>	In case the service/breakdown call are not attended in time i.e. within 24 Hrs of intimation, downtime compensation at the rate of 0.01% (of PO value) per day shall be recovered for the specific segment up to a maximum limit of 3% of the PO value.	
	<b>Failed HDD/SSD Clause</b>	Failed HDD/SSD disks shall not be returned back and shall be retained by SAC.	
	<b>OEM Authorization and support certificate</b>	OEM authorization letter must be submitted for tender specific reference number. The certificate should also mention that the Vendor has back-to-back support from OEM for after sales service of the augmented storage solution during warranty period. Without this letter, the quote maybe rejected.	

	<b>Compliance Statement</b>	Vendor must compulsorily provide items wise compliance statement.	
	<b>Malicious Code Certificate</b>	<p>The vendor should provide following certificate along with the bid</p> <p>(a) This is to certify that the Hardware and the Software being offered, as part of the bid, does not contain Embedded Malicious code that would activate procedures to :- (i) Inhibit the desires and designed function of the equipment. (ii) Cause physical damage to the user or equipment during the exploitation. (iii) Tap information resident or transient in the equipment/network.</p> <p>(b) The vendor will be considered to be in breach of the procurement contract, in case physical damage, loss of information or infringements related to copyright and Intellectual Property Right (IPRs) are caused due to activation of any such malicious code in embedded software.</p>	
	<b>Acceptance</b>	ATP is likely to be completed within One month after Installation. ATP documentation, detailed tests and stable system configuration shall be prepared by OEM/Vendor and approved by SAC. ATP will include minimum 72 hours total system (user software applications accessing the augmented disk storage solution) burn in, in lab environment. The vendor should demonstrate the performance of the entire storage solution onsite. Warranty period shall start after the successful completion of ATP at SAC.	
	<b>Delivery</b>	Vendor should deliver the solution <u>within 12 weeks</u> from date of purchase order.	

	<b>Installation and commissioning</b>	Installation and commissioning should be carried out <b>within 6 weeks or earlier</b> from date of delivery.	
	<b>Payment Terms</b>	100 % payment will be made after successful installation, commissioning & ATP of the solution.	

## 5. Site Related

**Operating Environment:** The complete (existing and proposed) solution should support operating temperatures from 10 to 35 Degree centigrade for continuous operation (24x7).

**Power:** Power points (Industrial type – India), with required ratings will be provided by SAC. Power will be routed through UPS of adequate Capacity.

## 6. Documents

<b>Sr. No.</b>	<b>Statement</b>	<b>Compliance by Vendor (Yes/No)</b>
<b>1</b>	Soft copies of the documents are to be provided. This should include Standard operating procedure for shutting down and booting the storage solution.	

## 7. Checklist

<b>S.No.</b>	<b>Description</b>	<b>Checked</b>
1	Data /Technical Sheets for all items of the storage solution being supplied, as applicable.	
2	Self-Certification stating that the Vendor and OEM are not blacklisted at any Government Organization in India (as on bid date).	
3	a) Address of the Sales and support office of OEM b) Address of the office of the Vendor	
4	OEM authorization letter with tender specific reference number. The certificate should also mention that the Vendor has back-to-back support from OEM for after sales service of the solution during warranty period.	



## 8. Bidding Model

Vendor should submit the offer in two (2) parts –

### i) **Technical and Commercial** offer with terms and conditions

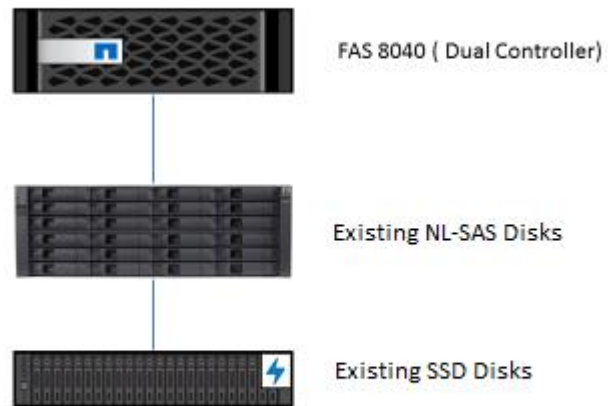
#### a. Technical offer should cover

- Compliance (Yes/No) by OEM for respective products in their letter head, with sign of authorized signatory and seal on each page of the offer along with supporting datasheets/documents.
- Compliance by vendor with signature & stamp of vendor's designated personnel on each and every page of the offer.
- Complete masked Bill of material (Annexure-3) (un-priced).
- Vendor should submit Technical & commercial terms and conditions, if any, in the technical offer only.
- **Vendor shall not disclose any prices with the technical bid/details. Disclosing any prices will lead to rejection of offer.**

### ii) **Price Bid**

- #### a.
- Price Bid should contain Bill of Material (Annexure-3) with price. Commercial Bill of Material should be identical to un-priced BoM. Any terms and conditions mentioned in commercial offer will not be considered.

## Annexure – 1: Layout of Existing NetApp Storage Diagram



## Annexure – 2: Proposed Augmentation of NetApp storage solution



### New Augmented Storage Configuration: ITID Storage

- a. Total Raw space: 3231 TB (126 \* 22 TB and 30 x 15.3 TB)
- b. Total Parity space: 523.2 TB (21 \* 22 TB and 4 \* 15.3 TB) -
- c. Usable Disk space: Approx. 2000 TB (1700TB NLSAS + 300TB SSDs)
- d. Total spare disk: 126 TB (5 \* 22 TB and 2 \* 15.3 TB)
- e. Total HDDs: 126 \* 22 TB and 30 x 15.3 TB

### Annexure – 3: Bill of Materials

Sr. No.	Item	Unit Price	Quantity	Tax (%)	Total Price
1.	NetApp NL- SAS (minimum 22 TB raw capacity)		126		
2.	NetApp NVMe-SSDDisk (minimum 15.3 TB raw capacity)		30		
3.	Cluster Switch		2		
4.	Any additional item (if required for offered solution)* [additional rows may be added for each item by the vendor .....]				
<b>Total</b>					