April 30, 2026

Version 1.0

Request for Proposal (RFP)

Supply, Implementation & Support of Software Defined Storage (SDS) Solution

Institute of Chartered Accountants of Pakistan (ICAP)

1. Introduction

ICAP intends to procure a Software Defined Storage (SDS) solution to expand its existing hyperconverged infrastructure (HCI) environment currently deployed on Sangfor HCI platform.
The proposed solution must be vendor-neutral, enterprise-grade, and fully compatible with existing Sangfor HCI environment, while supporting open integration standards and multi-vendor hardware infrastructure. The objective is to enhance storage scalability, performance, resilience, and unified management across file, block, and object storage workloads.
ICAP reserves the right to amend, modify, or cancel this RFP at any stage without assigning any reason.

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2. Objective of RFP

The purpose of this RFP is to invite proposals from qualified vendors for:

- Supply of SDS software and (if required) compatible hardware
- Integration with existing Sangfor HCI environment
- Implementation, configuration, and testing
- 3 years of 24/7 OEM support and maintenance
- Scalable storage expansion for enterprise workloads

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3. Eligibility & Mandatory Requirements

3.1 Vendor Qualification Requirements (Compulsory)

- Solution must be **compatible with x86 (Intel/AMD) based enterprise servers**
- OEM must have **minimum 3 SDS deployments in Pakistan**
- Must provide **proof of deployments (reference sites mandatory)**
- Must provide **3 years 24/7 OEM technical support**
- Must include **onsite installation and configuration by OEM-certified engineers**
- Solution must be **interoperable with existing HCI (Sangfor or equivalent SDS/HCI platforms)**

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4. Technical Requirements

4.1 Object Storage Requirements

The solution must support:

- S3 compatible object storage API (mandatory)
- Swift protocol compatibility
- Multi-version object storage with lifecycle policies
- Data encryption (SSL/TLS with CA-issued certificates)
- Bucket lifecycle management (auto expiration & cleanup)
- QoS controls (bandwidth and request rate limiting per bucket/user)
- Storage quota controls per user/bucket
- ACL-based access control for secure data sharing
- Object scalability:
    - Minimum 100 million objects per bucket
    - Minimum 5 billion objects per storage pool
- Data compression at object level with reporting
- Audit logs for object-level operations

4.2 File Storage Requirements

The solution must provide:

- lossless file compression
- Native file access via:
    - NFS
    - CIFS/SMB
    - FTP
- Proprietary high-performance client (optional enhancement)
- Global namespace across cluster nodes
- Directory-level quota management
- Snapshot capability:
    - Minimum interval: 15 minutes
    - Directory and subdirectory snapshot support
- WORM (Write Once Read Many) protection with immutable file locking
- AD/LDAP integration for authentication
- IP-based access control (blacklist/whitelist)
- Multi-protocol shared access with granular permissions
- Performance monitoring per directory:
    - IOPS
    - Latency
    - Throughput

4.3 Block Storage Requirements

- iSCSI block storage support (mandatory)
- CHAP authentication:
    - One-way

  - Two-way
  - No authentication option
- Snapshot & cloning:
  - Scheduled snapshots
  - Consistency group snapshots (multi-LUN)
  - Linked and full cloning support
  - Snapshot chain visualization
- LUN-level storage policies:
  - Replication factor
  - Striping policy
  - QoS policies

4.4 Kubernetes & Container Integration

- CSI (Container Storage Interface) support
- Native integration with Kubernetes environments
- Support for dynamic provisioning and persistent volumes

4.5 Reliability & Data Protection

- Cluster-level high availability using virtual IP failover
- Support for:
  - Multi-replica architecture
  - K +M erasure coding
- Disk health prediction and failure forecasting
- Automatic bad sector scanning
- Slow disk detection and isolation
- Automated data rebuild and rebalancing
- Configurable rebuild speed throttling
- Post-expansion data rebalancing support

4.6 Monitoring & Management

- Centralized GUI-based management console
- Role-based access control (RBAC):
  - Admin
  - Read-only users
- Full system logging and audit trails
- Cluster health check (one-click diagnostics)
- Performance monitoring dashboards:
  - CPU, RAM, disk, network utilization
  - IOPS, latency, throughput
- Object, file, and block-level performance visibility
- Client connection monitoring (CIFS/NFS/FTP sessions)
- VLAN-based multi-tenant support
- Storage topology mapping (LUN-to-host mapping)
- Custom branding support (logo/UI customization)
- One-click cluster shutdown capability

5. Hardware Requirements

5.1 Cluster Configuration

- Total Nodes: **3 Nodes minimum**

5.2 Per Node Minimum Specifications

Component	Requirement
CPU	Intel Xeon Silver class or higher (12 cores minimum)
Memory	Minimum 64 GB RAM
OS Disks	2 × 240 GB SSD (redundant)
Data Drives	2 × 4 TB 7200 RPM Enterprise SATA HDD
Cache Tier	1 × 7.68 TB NVMe SSD
Network	Minimum 2 × 1GbE + 6 × 10GbE SFP+

5.3 Networking Requirements

- 6 x 10GbE SFP+ ports required (per node)
- 6 x Multimode optical transceivers (850nm, 300M) (per node)
- 6 x LC-LC multimode fiber cables (5M) (per node)

5.4 Warranty & Support

- 3 Years OEM Hardware Warranty
- 3 Years 24/7 Technical Support
- RTF (Return to Factory) or equivalent support model

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6. Software Licensing Requirements

- Perpetual SDS licensing covering:
  - Minimum **24 TB RAW capacity**
  - Minimum **13 TB usable expansion capacity**
- Must include:
  - File storage
  - Block storage
  - Object storage
- Licensing must be scalable for future expansion
- Must include:
  - Snapshot
  - Tiering
  - QoS

- Compression
- Encryption features

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7. Compatibility Requirement (Critical)

The proposed solution:

- MUST be fully compatible with existing **Sangfor HCI environment**
- MUST support integration without requiring replacement of current HCI infrastructure
- MUST support standard storage interfaces:
  - iSCSI
  - NFS
  - SMB/CIFS
  - S3 API
- MUST allow coexistence with existing storage clusters

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8. Implementation Scope

Vendor must include:

- Solution deployment and configuration
- Integration with existing HCI environment
- Performance tuning
- Testing & validation
- Knowledge transfer to IT team
- Documentation delivery

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9. Deliverables

- Fully operational SDS cluster (3-node minimum)
- Integration with Sangfor HCI environment
- Admin and user documentation
- Architecture diagram
- Test & acceptance report
- Training sessions for IT staff

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10. Evaluation Criteria

Proposals will be evaluated based on:

- Technical compliance (40%)
- Compatibility with existing HCI (25%)
- Cost-effectiveness (20%)
- Vendor experience & local presence (10%)
- Support & SLA quality (5%)

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11. Submission Requirements

Vendors must submit:

- Technical proposal
- Bill of Quantity (BoQ)
- Compliance matrix (point-by-point)
- Reference deployments in Pakistan
- Support SLA document
- Pricing breakdown (hardware + software + services)

Bid Timetable

Description	Date
RFP Issuance	May 25, 2026
Queries Submission Deadline	June 08, 2026
Bid Submission	June 12, 2026
Opening of Bids	June 13, 2026

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