











## زیریں 2- (میں درجہ)

SPECIFICATIONS FOR STORAGE SYSTEM	
<b>Item</b>	2 Storage Appliances (HA Cluster) (Specification below are for each Storage Appliance)
<b>CPU</b>	Minimum AMD Ryzen or Intel Xeon 4-core 2.2 GHz
<b>System Memory</b>	Minimum DDR4 ECC 32 GB RAM
<b>Performance</b>	Up to 105,000 4K random read IOPS Minimum 2,200 MB/s sequential read performance
<b>Ports</b>	Minimum 4 x RJ-45 1GbE LAN Port Minimum 2 x 10 GbE SFP+ (must include 2 Twinax DAC Cables, SFP+ to SFP+, 2 meter) Minimum 2 x USB 3.0 Port 1 x Expansion Port for Chassis
<b>PCIe</b>	Minimum 1 x 8-lane x8 slot Supports network interface cards and M.2 NVMe SSD adapter cards for SSD cache
<b>RAID Types Support</b>	Must support Hybrid RAID, Basic, JBOD, RAID 0, RAID 1, RAID 5, RAID 6, RAID 10
<b>File Systems</b>	Must support Btrfs, ext4, ext3, FAT32, NTFS, HFS+, exFAT
<b>Networking protocols</b>	Must support SMB, AFP, NFS, FTP, WebDAV, CalDAV, iSCSI, Telnet, SSH, SNMP, VPN
<b>Drive Bays</b>	16
<b>Drive Bay Expansion</b>	Should support up to 28 Bays in Total
<b>Hard Drives</b>	6 x HDD 3.5" 16TB SATA (for Each Appliance) 3 x HDD 2.5" 3.84TB SSD (for Each Appliance)
<b>Compatible Drives</b>	3.5" SATA HDD 2.5" SATA HDD 2.5" SATA SSD
<b>Hot Swappable Drive</b>	All drives Should be Hot Swappable Drive
<b>SSD cache</b>	Read/write cache support 2.5" SATA SSD support M.2 NVMe SSD support
<b>Redundant Power</b>	Must be present
<b>Backup</b>	Support local backup, network backup, and backup data to public clouds
<b>Agentless backup for Vmware</b>	Must support Forever-incremental backup Must have Built-in global deduplication Must support Application-aware image backup
<b>File Server Backup</b>	Must support Agentless backup Must be able to configure flexible backup schedule Must support multiple recovery points by creating a new version for each backup run, allowing us to easily recover files from any previous point in time. Must support Incremental mode backup Must support Mirroring mode backup
<b>Backup tools</b>	Configuration backup, macOS Time Machine support, Cloud

	Station Backup, Shared folder sync
<b>Cloud Sync</b>	Must support One or two-way synchronization with public cloud storage providers including Amazon Drive, Amazon S3-compatible storage, Box, Dropbox, Google Cloud Storage, Google Drive, Microsoft OneDrive, OpenStack Swift-compatible storage
<b>Supported Networking Protocols</b>	SMB, AFP, NFS, FTP, WebDAV, CalDAV, iSCSI, Telnet, SSH, SNMP, VPN L2TP
<b>File sharing capability</b>	Should support minimum user account: 16,000; shared folder: 512; concurrent SMB/AFP/FTP/File Station connections : 4,000
<b>Privilege</b>	Must be able to configure Windows Access Control List (ACL), application privilege
<b>Built-In Virtualization</b>	Deploys and runs virtual machines on the NAS, including Windows, Linux, etc. Must Support VMware vSphere 6, Microsoft Hyper-V, Citrix
<b>Directory service</b>	Must connect with Windows Active Directory Services, enabling domain users to login via SMB/NFS/AFP/FTP/File Station using their existing credentials.
<b>Utilities</b>	Must have Snapshot Manager for VMware, Snapshot Manager for Windows, NFS Plug-in for VMware VAAI
<b>Supported clients</b>	Windows 10 onwards
<b>Supported browsers</b>	Microsoft Edge Chromium, Google Chrome, Firefox, Safari
<b>Security</b>	Must have built in Firewall, shared folder encryption, SMB encryption, FTP over SSL/TLS, SFTP, Rsync over SSH, login auto block, Let's Encrypt support, HTTPS (customizable cipher suite)
<b>File Serving</b>	Virtual drive, remote folder, Windows ACL editor, compressing/extracting archived files, bandwidth control for specific users or groups, creating sharing links, transfer logs
<b>FTP Server</b>	Supports bandwidth control for TCP connections, custom FTP passive port ranges, anonymous FTP, FTP over TLS/SSL and SFTP protocols, network booting with TFTP and PXE support, and transfer logs
<b>Universal Search</b>	Offer global search into applications and files
<b>Form Factor (RU)</b>	3U
<b>Configuration</b>	2 Storage Appliance must be configured for HA Active-Passive Mode
<b>Warranty</b>	3 Years Parts & Services
<b>Professional Services</b>	Installation & Configuration should be provided by vendor accredited engineers
<b>Other</b>	<ul style="list-style-type: none"> <li>- Must include Rail Kit for each Appliance</li> <li>- Installation and configuration of Physical hardware, Connectivity between Existing Infrastructure as per Best Practices</li> <li>- Bidder must submit Authorized Dealer/Reseller/Distributor Letter</li> <li>- On the Job Training for Basic Management and Configuration of Proposed Storage to commission for ICT Staffs</li> </ul>



## 4- ځوابونه

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