



INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
MATERIALS MANAGEMENT DIVISION
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Ref No.(PR No. 1000048388)

(Rfx No. 6100002250)

Technical Specifications : SAN Storage (38.4TB RAW All Flash Dual Controller SAN Storage) (Qty : 1)

Sr. No	Item Description	Detailed Technical Specification	Technical Compliance (Yes / No)	Additional Information (if any)
	SAN Storage (38.4TB RAW All Flash Dual Controller SAN Storage.)			
1	Proposed storage must have a minimum 12 G SAS Drive side connectivity, 12 G SAS internal data bus, and 12 SAS expansion ports.			
2	Proposed storage should have symmetric active-active controllers, dual PSUs, and dual FAN modules. System components like power supplies, cooling fans, controllers, host boards, and HDD/SSD drives should be modular in design to lower maintenance complexity.			
3	Storage should have at least cache memory 32GB per controller and can be expandable up to 64GB or more.			
4	The cache should be protected in case of a Power failure by a Super capacitor backup module.			

5	Each controller should have 4x1 GbE -- at least 2 numbers of replaceable modular Card Slots. Below host interfaces should be supported in each slot, and possible to interchange the card without the need to change or upgrade the storage controller.			
6	<ul style="list-style-type: none"> • 16Gb/s FC x 4 • 32Gb/s FC x 2 • 32Gb/s FC x 4 • 1GbE (Rj-45) x 4 • 10GbE (SFP+) x 4 • 25GbE (SFP28) x 2 12Gb/s SAS x 2			
7	Should support below drives types, including SSD, SAS/SATA HDD in the same enclosure.			
8	<ul style="list-style-type: none"> • 2.5" SAS SSD • 2.5" 12Gb/s SAS 10,000 or 15,000 RPM HDD • 3.5" 12Gb/s NL-SAS 7,200 RPM HDD 3.2.5" SATA SSO, 3.5" 6Gb/s SATA 7,200 RPM HDD			
9	Proposed storage should support for RAID 0, RAID 1, RAID 3, RAID 5, a) RAID 6, RAID 10, RAID 30, RAID 50, and RAID 60 configurations. Should have RAID management software with an intuitive user interface for easy configuration and monitoring.			
10	Proposed Storage should be supplied with at least 4x 1G iSCSI & 4 x 10G SFP+ or 4x10G Copprt RQ-45 ports per controller.			
11	Storage should be quoted with trans-receivers (modules) 6x Cables required for connectivity.			
12	Support request: Proposed Storage should have an option to automatically create a support ticket with relevant logs with the OEM support in case of a critical event.			

13	Storage Capacity: Should be quoted with a minimum of 38.4TB all flash after RAID6 with dual ported SAS SSD, individual SSD drive capacity not more than 2TB. At least one global hot spare drive should be configured from day one.			
14	The system should be scalable to a minimum of 445 drives without having to add any additional storage controllers and by using a 12G SAS-connected expansion enclosure. Any additional license, if required to connect all 445 drives, should be included upfront.			
15	Storage should support 4-level Automated Storage Tiering with Automated data migration, with scheduling options.			
16	Storage should support up to 4TB or more of Flash Cache.			
17	Storage should support Block level Remote Replication with Synchronous Volume Mirror & Asynchronous Volume Mirror from day one, without any additional cost or any additional license; if required for the same should be included upfront.			
18	OS Support - Microsoft Windows Server 2019/2016/2012R2/2012/2008R2/2008, Windows 7 SPI, Windows 8.1, Microsoft Windows Hyper-V, Red Hat Enterprise Linux, SUSE Linux Enterprise, Rocky Linux, Sun Solaris, Mac OS X, VMware, Citrix XenServer, OpenStack Cinder, Proxmox, Ubuntu Linux.			
19	80 PLUS-certified power supplies delivering more than 80% energy efficiency.			
20	Intelligent multi-level drive spin-down.			
21	Relative humidity: 5 to 95% non-condensing, operating, and non- operating.			

22	Safety: UL, BSMI, CB Electromagnetic or substantially equivalent compatibility: CE, BSMI, FCC or substantially equivalent			
23	ISO Certification: ISO 9001, ISO 14001.			
24	5-year onsite support.			