

HIGH COURT OF SINDH, KARACHI

I.T Department

Tender for Data Center (2020-2021)

Corrigendum/Clarification in Lot-1, Lot-7 & Lot-9 of Tender Document

S #	Description	Type	Recommended Make	QTY
LOT 1. Storage Area Network -SAN				
1.1	<p>Supply, Installation and commissioning of Storage Area Network - SAN with SAN Switch Architecture Unified SAN Storage supporting Multi-Protocol (Block & File Level) Raw - 36 TB Usable 20 TB or higher. Cache Minimum 128GB per array or higher Storage Controller Dual Redundant Storage Controllers with Active-Active Configuration RAID Supporting RAID levels 0, 1, 10 and distributed RAID 5 and 6 Redundancy End to End Redundant Connections with No Single Point of Failure RAW Storage 19x1.8 TB 10K RPM SAS Disk Drives 2.5 inch form factor (20.7 Tb Raw). 6x800 GB SSD Flash 2.5 Form Factor (4.68 TB Raw) Modular Design Should have a Modular Design which may be upgradable Power and Cooling Redundant Power and Cooling Rack Rails Rack Mount Kit with all Accessories Management Web based Management software Expandability Should support a minimum of 500 Drives or more Front End Fc Ports 2 x 4 Ports 16 Gbps FC I/O Module per Array or higher Software Features Required Vvol Support Thin Provisioning Should support Automated policy based Data movement between Different Storage Tiers (if required in future) Dynamic Volume Migration between different Storage Tiers or Storage Systems Dynamic Volume/Lun Expansion Host Connectivity 500 or higher Drive Intermixing Ability to Intermix different Disk Drive Types in the same enclosure Drive Form Factor Should support 2.5" Disk Drives SAN to SAN Replication Should support SAN to SAN Replication (if required in future) Warranty Three Years Standard Warranty with (24x7) support ===== San Switch Brocade Gen 6 Based 24 Port San switch or equivalent or higher Active Ports 12 ports active SFPs 12 X 16 Gbps Sw SFPs FC Cables 6 X 5 Meter OM3 LC/LC FC Cable FC Cables 6 X 10 Meter OM3 LC/LC FC Cable Rack Rails Rack Mount Kit with all Accessories Warranty Three Years Standard Warranty with (24x7) support</p>	Hardware	DELL EMC / HPe / IBM or equivalent	1
LOT 7. Server Machines with licenced OS				
7.1	<p>Supply Installation of server Form Factor 2U, 2Sockets Rack Mount Server (GPU Capable) Chassis Chassis supporting up to 08 x 2.5" SAS/SATA Drives Processor 2 x Intel® Xeon® Gold 5218 2.3G, 16C/32T, 10.4GT/s, 22M Cache, Turbo, HT (125W) OR Equivalent Chipset Intel C620 chipset OR Better/Equivalent Memory 64 GB RDIMM, 3200MT/s, Dual Rank OR Equivalent Network Card 1 x Broadcom Quad Port 1G Base-T NIC Host Bus Adapter (HBA) 1 x Dual Port 32GB Fiber Channel HBA Storage/Raid Controller RAID Controller with 2GB Cache Supporting RAID level 0, 1, 5, 6 & RAID Span 10, 50, 60 OR Equivalent Hard Drives 02 x 240GB SSD SATA Mixed Use 6Gbps 2.5" Hot Plug S4610 Drive (OS Drives) 4 x 1.2TB 10K SAS Hot Plug Drive (Data Drive) Systems Management Enterprise License with Dedicated OOB Network Port. Supports remote management, Configuration & Troubleshooting Power Supply Dual Redundant Power Supply Hot Swap 1100Watts Optical Drive DVD R/W Drive Rack Rails Rack mounting kit along with cable management arm Warranty On Site Troubleshooting along with 3-Year (24/7-4hr) Comprehensive Warranty OS License 2 x Windows Server® 2019 Standard, 16CORE OEM License with multi language media kit.</p>	Hardware	HP & DELL or equivalent/higher	4
LOT 9. Smart UPS (20KVA)				
9.1	<p>Supply and installation of floor standing/tower Smart-UPS, 16 kW /20 kVA, Input 400V 3PH /Output 400V 3PH, Interface Port DB-9 RS-232, SmartSlot, 20 minutes on full load/battery backup. Warranty: 3 years Manufacture's Comprehensive warranty (with parts, labour & onsite support)</p>	Hardware	APC or Emerson OR equivalent / Higher International brand	1