



GOVERNMENT OF PAKISTAN
FEDERAL BOARD OF REVENUE
(Directorate General of (IT &DT))

Re. No. 2(90)S(IT)/2025

Islamabad, the 30th May, 2025

Subject: MINUTES OF THE PRE-BID MEETING REGARDING SUPPLY, INSTALLATION AND CONFIGURATION OF 150TB SAN FOR KARACHI DATA CENTER AGAINST TENDER NO. 2(57)SS(IT) /2025/DCKH

A Pre-bid Meeting for subject procurement activity, as was pre-fixed in the Invitation for Bids (IFB) published in leading national dailies, was held on 29th May, 2025 at the Skylight Conference Room, Federal Board of Revenue (FBR), FBR House, Constitution Avenue Islamabad, Pakistan.

2. The meeting was chaired by the Chief (Systems) and was attended by the FBR officers and technical team of PRAL & representatives of the prospective Bidders (in person). The purpose of the Pre-bid Meeting was to provide clarifications on queries/questions raised by the representatives of the prospective bidders on the Bidding Document for subject procurement activity, to facilitate them in preparation of effective technical and financial bids.

3. The Chief (Systems) gave a brief overview of the PPRA guidelines and apprised on the structure of the Bidding Documents. The prospective bidders' representatives were thereafter invited to share their queries for clarification. In view of the queries raised by the bidder's representative during the meeting, the FBR team clarified the same in the light of the relevant clauses of the bidding document. and FBR system requirements.

4. In addition, the representatives were also given one (01) day time, to share their queries in writing also, enabling to avoid any confusion. In this regard, it was clarified that the Federal Board of Revenue would reply all the queries of the prospective bidders in the form of Minutes of Pre-bid meeting. The Minutes of Pre-bid meeting would be shared with all the prospective bidders who have participated in the Pre-bid Meeting and/or would have asked for clarifications subsequent to the meeting. Besides, the minutes would also be uploaded on the website of the Federal Board of Revenue www.fbr.gov.pk/tenders.

5. Accordingly, the following table provides all queries either asked during Pre-bid and/or following meeting, or made in writing, by the prospective bidders and replies thereof by FBR:

Sr.#	RFB Section	Specifications as per RFB	Queries/Suggestion	Clarifications by FBR
1.	Section V: Schedule of Requirements, Technical Specification	Storage Type: The proposed Storage System should be Mission Critical Storage Array. SAN should be FC enabled. The proposed Storage System must be 100% redundant with no single point of failure. It must have load balancing and seamless failover capability in case of a component failure.	The workload requirements can be fulfilled with midrange to high-end storages. The offered storage can full fill the technical requirements and financially viable solution, please confirm.	Mid-Range to high end storage solution is required as per SBD.
2.	Section V: Schedule of Requirements, Technical Specification	Controllers: Proposed Storage should have dual (2) physical storage controllers. The option to upgrade to at least four (4) physical storage controllers in Active-Active architecture. Storage systems should support true active/active LUN access and controller architecture with load balancing, load sharing features. Software upgrades must be online without any need for path failover/failback. All rack PDUs must be smart and support IEC C13/C19 sockets.	Proposed Storage should have dual (2) physical storage controllers, with support of scale up and scale out features to add more hardware capability on demand with Active-Active architecture. Storage systems should support true active/active LUN access and controller architecture with load balancing, load sharing features. Software upgrades must be online without any need for path failover/failback. Please confirm.	Active-Active architecture is required. If Vendor purposed multiple appliance to achieve the expansion requirement, FBR have no objection.
3.	Section V: Schedule of Requirements, Technical Specification	<p>Capacity Sizing: 150TB Useable capacity without compression and deduplication. Drives (not more than 08 TB capacity) with RAID 5 or 6). Disk should be All flash or SAS SSD. Only physical (usable) capacity will be considered. On the above useable capacity effective Capacity must be guaranteed with a minimum ratio 2:1 or higher. Hot spares as per manufacturer best practices. 30TB Out of 150 TB capacity will be provisioned for NAS purposes:</p> <ul style="list-style-type: none"> • Raid group / disk group size should not be larger than 16 to reduce chances of data loss. <ul style="list-style-type: none"> • Hot-spares as per manufacturer best practices. • Minimum 02 disks per raid group should be spared. • Additionally, global hot spare disk should be included for all raid group • Space efficient LUN Cloning and copying. • RAID levels 10, 5 or 6 should be supported if proposed solution is with traditional RAID or Dynamic RAID/equivalent 	The All Flash NVMe drives are accepted for the useable capacity. Please confirm	Any superior type of disks are acceptable i-e All Flash NVME

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4.	Section V: Schedule of Requirements, Technical Specification	<p>Scalability: Should support at least 200 disk drives or higher Storage should be scalable up to 500 TB usable capacity or higher without additional hardware other than disks.</p> <p>The proposed Solution should be able to handle minimum 40000 IOPs with 60% Read and 40% write with 16K or higher block size</p>	<p>To achieve the 500TB scalability in future, the disk enclosures will be required along with the Hard Drives.</p> <p>Please confirm.</p>	<p>Disk enclosure will be required at the time of expansion if required.</p>
5.	Section V: Schedule of Requirements, Technical Specification	<p>Encryption & De-Duplication Method:</p> <p>Storage System should be capable of hardware level encryption without any performance impact.</p> <p>De-Duplication and minimum 2X or higher compression must be included for the total capacity.</p> <p>Data Reduction Guarantee must be provided by OEM for 2:1 or higher.</p> <p>Storage system should be capable of compaction technology.</p> <p>Storage should be capable of encrypting all type of data.</p>	<p>The offered storage can provide any kind of Encryption i.e. can be provided Hardware or Software without any performance impact.</p> <p>Please confirm</p>	<p>Any type of encryption will be acceptable i-e hardware or software</p>
6.	Section V: Schedule of Requirements, Technical Specification	<p>Host Connectivity Ports and Protocols: Proposed storage system must have a minimum of 8 x 16Gbps FC ports per controller or higher. 4x10Gb Port per controller and should support NAS protocols such as NFS/CIFS.</p>	<p>The Front End ports 32Gbps FC are accepted in the offered storage.</p> <p>Please confirm</p>	<p>32 G Front end port are required in purposed solution.</p>
7.	Section V: Schedule of Requirements, Technical Specification	<p>The OEM must supply the required storage solution through its Authorized Partner holding the highest level of partnership in Pakistan</p>	<p>Only few solution provider has the Highest Level of Partnership with OEM so it is humble request to make it Authorized Partner with certified technical resources and MAL letter for the designated storage tender.</p>	<p>Any high Level partnership will be acceptable i-e Platinum or Gold</p>

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8.	Section V: Schedule of Requirements, Technical Specification	Reference to subject tender. Please ask the following clarification queries: <ol style="list-style-type: none"> 1. The All Flash NVMe drives are accepted for the useable capacity. 2. Please elaborate Storage System should be capable of hardware level encryption without any performance impact. 	Explanation	Any superior solution drive type is acceptable but spec should be same. Any type of encryption will be acceptable i-e hardware or software.
9.	Section V: Schedule of Requirements, Technical Specification	SAN Fabric Specifications: Two SAN switches with at least 24 x 32 Gbps ports active per switch. 32 Gbps SW SFP Transceiver for all active ports per switch. Fabric extend licenses are required. Fiber Cable TOP brand LC/LC (OM4) 30m x 05, 15m x 10, 10m x 15 multimode per switch (Total:30). Redundant Power Supply and rail kits must be provided for all switches. Support for encryption of ISL traffic (including site to site traffic). Should be included with all applicable licenses, considered to be in the solution.	As discussed in the Pre-bid the storage capacity requirements can be increased or decreased. The solution can be accepted in two (02) LOTs as: <ol style="list-style-type: none"> 1. Storage LOT-01 2. SAN Switches LOT-02 Please confirm.	SAN and Switches will be part of SAME LOT. Please comply as per SBD.
10.	Section III: Bid Data Sheet	FBR can increase or decrease the percentage by 50%	Please refer to Page 59, "Percentage for quantity increase or decrease is 50%", 50% decrease may impact discounts acquired from OEM. Kindly reconsider this requirement.	Please comply as per SBD
11.	Section V: Schedule of Requirements, Technical Specification	schedule of requirements, delivery time as per SBD is 8 to 10 weeks	Please refer to page 62, schedule of requirements, delivery time as per SBD is 8 to 10 weeks, kindly extend the delivery timeline 12 to 14 weeks.	Due to urgency of the project, Supplier must meet the mention Delivery time i-e 8 to 10 weeks

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12.	Section V: Schedule of Requirements, Technical Specification	Please refer to page 64 of SBD	Please refer to Page 64, we assume that Rack and PDUs will be provided by FBR and Vendor has to quote the SAN storage only. Please clarify	All PDUs will be pre-installed in FBR Datacenter. FBR will provide PDUs but power cables will be supplied with Storage Solution.
13.	Section V: Schedule of Requirements, Technical Specification	Please refer to page 65 of SBD	Please refer to Page 65, "Host Connectivity Ports and Protocols", required 10G ports are Electrical or Optical. Please clarify	10G Electrical ports are required with SFPs if required.
14.	Section V: Schedule of Requirements, Technical Specification	Please refer to page 65 of SBD	Please refer to Page 65, "Host Connectivity Ports and Protocols", 16G FC Ports are required whereas SAN switches required of 32GB FC , it is suggested to standardize this	Please Note that 32G ports are required in SAN and SAN switches.
15.	Section V: Schedule of Requirements, Technical Specification	Please refer to page 66 of SBD	Please refer to Page 66, "STORAGE METRO-CLUSTERING/MULTI- SITE REPLICATION", Please confirm the DR site for replication. Also, please share the existing storage model which will be replicated. Storage replication required Sync or Async. Please clarify.	DR site will be Islamabad Dell Unity 300 Dell Unity 600 Huawei Oceanstor 18500

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16.	Section V: Schedule of Requirements, Technical Specification	Please refer to page 67 of SBD	Please refer to Page 67, "Implementation", Multi-site replication and Data migration from old storage system will be considered integral part of implementation. Please confirm the Old Storage model and what type of Data/Applications/Database running on current SAN storage.	Old Storage Models Dell Unity 300 Dell Unity 600 Huawei Oceanstor 18500
17.	Section V: Schedule of Requirements, Technical Specification	Please refer to page 67 of SBD	Please refer to Page 67, 4 th and 5 th Year warranty will be part of PO/Contract as well, please clarify ?	Purposed Solution will with 3 years support and warranty cost. 4 th and 5 th year cost is required separately but not a part of PO/Contract.
18.	Section V: Schedule of Requirements, Technical Specification	General Query	During RMA of hardware, will FBR return the faulty hard drive, please clarify?	FBR Will keep the Faulty hard drives.
19.	Section V: Schedule of Requirements, Technical Specification	General Query	We assume that site readiness completes in all respect that is Power, Cooling, Rack, Power till Rack, PDUs, Fiber patch cords (Electrical/Optical) etc. will be provided by FBR and not in vendor scope. Please confirm.	Delivered Storage will be installed in well-established Datacenter of FBR(Karachi)
20.	-	General Query	As per SBD, bid submission will be on EPADS, whereas hard copy required as well. Hardcopy requirement may please be removed. Please advise.	Hard Copy is mandatory as per SBD.
21.	-	General Query	This is requested to please extend the bid submission deadline and kindly make it after EID holiday.	Due to critical of nature, FBR Will not extend the Date of submitting of Bid.