



**GOVERNMENT OF PAKISTAN
FEDERAL BOARD OF REVENUE
(PAKISTAN RAISES REVENUE PROGRAM)

Re. No. 2(2)/2025-Addl.Dir(P&F)

Islamabad, the 22nd April, 2025

Subject: Minutes of the Pre-Bid Meeting - Procurement of Storage Area Network & Allied Backup Equipment for FBR Data Centers [RFB No: PK-FBR-471738-GO-RFB Reference No: 2(2)/2025-Addl.Dir(P&F)]

A Pre-bid Meeting for subject procurement activity, as was pre-fixed in the Request for Bids' Specific Procurement Notice (SPN) published in leading national dailies, was held on 26th March, 2025 at the Skylight Arena Conference Room, Federal Board of Revenue (FBR), FBR House, Constitution Avenue Islamabad, Pakistan.

2. The meeting was chaired by the Chief (IT-Systems) and was attended by the officers/officials of Bide Evaluation Committee & representatives of the prospective Bidders (in person as well as online/virtually). 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 (IT-Systems) gave a brief overview of the World Bank Procurement 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 two (02) days' time, to share their queries in writing also, enabling avoiding 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 Follow Meeting, or made in writing, by the prospective bidders and replies thereof by FBR:

Sr.No	RFB Section	Specifications as per RFB	Query Related to Storage/ Backup Category	Queries/Suggestion	Clarifications by FBR
1	Section VII - Schedule of Requirements	<p>RFP Page no 52, b) Specific Experience:</p> <p>The Bidder shall demonstrate that it has successfully completed at least two (02) projects within the last five (05) years prior to the bid submission deadline, each with a value of at least Rs. 300 million and featuring an enterprise SAN solution exceeding 500TB. These projects must have been successfully and substantially completed and must be similar/comparable in nature and complexity to the Goods and Related Services under this RFB. For a joint venture, either member or the combined entity can fulfill this requirement.</p>	SAN & Backup Recovery Appliance	The scale of this project is substantial, and opportunities of this magnitude arise only rarely. Therefore, to ensure a competitive bidding process, it is humbly requested to set the requirement at a minimum of five similar projects completed within the last ten years prior to bid submission.	Incorporated Response in Addendum No.01 to RFB.
2	Section VII - Schedule of Requirements	Technical Specifications	SAN & Backup Recovery Appliance	Additionally, you may also mandate certified technical resources to further enhance the quality and expertise of the participating bidders.	Implementation of the Storage systems must be done by directly OEM. The installation & configuration should be carried out by certified engineers from OEM.
3	GCC 28.3 The period of validity of the Warranty shall be: 05 Years from the date of issuance of Final Acceptance Certificate. For purposes of the Warranty, the place(s) of final destination(s) shall be: Islamabad and Lahore.	Section IX – Special Conditions of Contract	SAN & Backup Recovery Appliance	Please clarify the period required for PAT?	FBR will provide final acceptance certificate /letter within 60 days after confirmation of FBR technical team regarding the supply of equipment (all BOQ, required Items) and successful installation/commissioning /testing of all Storages and backup appliances.

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4	GCC 28.3 Warranty and support for 5 years after PAT/UAT.	Section IX – Special Conditions of Contract	SAN & Backup Recovery Appliance	Criteria for PAT?	Testing of all functions and feature set as per RFB
5	Section VII - Schedule of Requirements Technical Specifications	Encryption & De-Duplication Method · Storage System should be capable of hardware level encryption without any performance impact. · De-Duplication and minimum 3X or higher compression must be included for the total capacity. · Data Reduction Guarantee must for 3:1 or higher must be provided by OEM.	SAN & Backup Recovery Appliance	Data Reduction mentioned 3:1 and 4:1. Please clarify if 3:1 is required for all storages?	Data Reduction minimum 3:1 is required in Storages and 30X minimum required for Backup. For backup appliance, Data compression ratio need to be 60% to 85% with proven verified example.
6	Section VII - Schedule of Requirements Technical Specifications Data Migration from old storage arrays to new storage	Implementation of the Storage systems must be done by directly OEM. The installation & configuration should be carried out by certified engineers from OEM. · Multi-site replication and Data migration from old storage system will be considered integral part of implementation. · All ports must be fully populated, and all required convertors / cables and allied accessories must be provided by the supplier	Storage Category	Please share old storage details i.e. make and models	Huawei 18500 V5 Huawei 5500 V3 and Huawei 2600 V3 Dell Unity 300 and 600
7	Section VII - Schedule of Requirements Technical Specifications Data Migration from old storage arrays to new storage	Implementation of the Storage systems must be done by directly OEM. The installation & configuration should be carried out by certified engineers from OEM. Multi-site replication and Data migration from old storage system will be considered integral part of implementation.	SAN	Total data which needs to be migrated	SQL Databases, Oracle Databases, Vmware Datastore, File data etc.

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		All ports must be fully populated, and all required convertors / cables and allied accessories must be provided by the supplier			
8	Section VII - Schedule of Requirements Technical Specifications Data Migration from old storage arrays to new storage	19. Implementation Implementation of the Storage systems must be done by directly OEM. The installation & configuration should be carried out by certified engineers from OEM. Multi-site replication and Data migration from old storage system will be considered integral part of implementation. · All ports must be fully populated, and all required convertors / cables and allied accessories must be provided by the supplier	SAN	Migration is for Block data OR any file data migration also required?	Both file and Block Data migration is required.
9	Section VII - Schedule of Requirements Technical Specifications Advance training for 4 persons which includes exam vouchers	Training: Advance level training at OEM certified facilities from OEM for four (4) personnel on the proposed models to be conducted by manufacturer or authorized education partner at certified facilities inclusive of hands-on lab sessions is required. Training should cover operational procedures as well as mapped to authorized certification path for technical personnel. Certification vouchers for proposed training from authorized testing Centre to be included. The training to be performed at the certified training center of the principal	SAN & Backup Recovery Appliance	Enterprise storage training for 4 persons and backup storage training for 4 persons so in total it will be 8 training candidates?	Please refer to the RFB requirement, training at OEM certified facilities from OEM for Four (04) personnel on the proposed models and training is to be performed at certified training center of the Principal. Advance Level Training is required in multiple batch separately as: 04 Personnels for Enterprise SAN Storage 04 Personnels for Backup & Recovery Appliance

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10	Section VII - Schedule of Requirements Technical Specifications	Hot swappable drive and controllers	SAN & Backup Recovery Appliance	Drives can be hot swap however controllers don't. please confirm.	Hot swappable Drives are required however no downtime should be occurred during the replacement of Controllers or other connectivity interfaces.
11	Section VII - Schedule of Requirements	The proposed replication solution should support active-active-DR data replication at metro distance. Both Active and bunker storage replicate data on Async DR site and Sync replication on dark fiber at same time.	Storage Category	What is the distance between Metro Sites?	Distance between Metro sites is within the Dark fiber distance i-e 80 to 100 KM.
12	Section VII - Schedule of Requirements	The proposed replication solution should support active-active-DR data replication at metro distance. Both Active and bunker storage replicate data on Async DR site and Sync replication on dark fiber at same time.	Storage Category	What is the Link, Latency and Bandwidth available between Metro Site and DR Site.	Dark fiber between primary site and metro Site and IP link between Primary and DR site.
13	Section VII - Schedule of Requirements	Storage System must have capability to Seamless migrate data from old storage system.	Storage Category	Please share the existing environment details which w.r.t current storage details and Storage deployment architecture, Physical Hosts Details and Operating/Hypervisor Details.	Existing Storage Huawei 18500 V5 and Huawei 2600 V3. Huawei 2288 and 2488 V5 servers with Fiber channel connectivity. Hypervisor ESXi7
14	Section VII - Schedule of Requirements	General Query	Storage Category	How many Physical Hosts will be at Primary Site and DR Site?	65+ server on primary site, 25 + server on DR and 05+ servers on Metro Site.
15	Section VII - Schedule of Requirements	Proposed Storage should have Four (4) physical storage controllers. Option to upgrade to at least eight (8) physical storage controllers.	Storage Category	Please rationalize 1TB per controller cache requirement (Total 4TB per storage).	Total 4 TB Cache is required in one storage box. In case 1 TB cache is not available in single controller, OEM have to install additional controllers in mesh architecture to achieve 4 TB cache.
16	Section VII - Schedule of Requirements	Capacity Sizing	Storage Category	In case of hard drive failure, will FBR return faulty hard drives for warranty claim or not. Please confirm.	FBR will keep the faulty Drives.
17	Section VII - Schedule of Requirements	Should support Media LTO9, LTO8, LTO7	Backup & Recovery Appliance	What type of LTO Drive technology is required? Please note that LTO-9	LTO 9 Drives are required. LTO9 Tapes support.

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				drives can read and write to LTO-8 and LTO-9 media only.	LTO7 is plus and it is not mandatory.
18	Technical Evaluation (ITB 32.4)	The OEM must be registered with SECP and relevant Tax Authorities in Pakistan. Relevant documentation must be attached with the bid.	SAN & Backup Recovery Appliance	Please refer to page 51 of RFP "OEM must be registered with SECP", kindly relax this clause as many OEMs operate from region with their Authorized partners in Pakistan. Relaxing this clause will allow maximum OEMs to participate and this will create healthy competition.	Please comply to RFB requirement.
19	Section VII - Schedule of Requirements	System Units Proposed Storage should have Four (4) physical storage controllers. Option to upgrade to at least eight (8) physical storage controllers.	Storage Category	Any specific reason for requiring 4 controllers per storage array?	It is mandatory requirement, please comply to the RFB requirement
20	Section VII - Schedule of Requirements	Migration and Virtualization Storage System should be equipped with migration and virtualization licenses to ensure seamless automated migration & management of other SAN storages box from this proposed solution. · Storage System must have capability to Seamless migrate data from old storage system.	Storage Category	Storage System should be equipped with migration and virtualization licenses to ensure seamless automated migration & management of other SAN storages box from this proposed solution." Please clarify what is meant by " management of other SAN storage box "?	Storage System should be equipped with migration and virtualization licenses to ensure seamless automated migration & management of other SAN storages box from this proposed solution. The proposed solution must be capable with the aforesaid licenses and its admin console must be capable to have virtualize access of other SAN storage box to perform migration and other related tasks. Instead of accessing this SAN and other SAN management separately in different consoles.
21	Section VII - Schedule of Requirements	NAS Gateway, NAS Management	Storage Category	Unified storage can be offered wherein SAN and NAS storage is available from same storage arrays? or separate NAS storage is required?	NAS feature is required same storages. Please comply to the RFB requirement

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22	Section VII - Schedule of Requirements	All switches should be capable of being upgraded to and supporting 32Gbps ports/SFP Fiber Cable LC/LC (OM4) 30m x 10, 15m x 20, 10m x 70 multimode per switch, (total 100)	Storage Category	Please confirm if the following lengths of LC/LC (OM4) Fiber Cable are correct for the DR site: 30m x 5, 15m x 10, 10m x 35?	The lengths of LC/LC (OM4) Fiber Cable are required or the DR site: 30m x 5, 15m x 10, 10m x 35.
23	Section VII - Schedule of Requirements	Multi-site replication and Data migration from old storage system will be considered integral part of implementation.	Storage Category	Please share details of old storage system: Storage vendor? Connectivity Type (FC/ISCSI/NAS)? Server details (available HBA/ISCSI ETH ports). Applications using old storage whence data needs to be migrated	Huawei 18500 V5 Huawei 5500 V5 Huawei 2600 V3 and Dell unity 300 and 600. Connectivity type FC Applications are SQL oracle Vmware and file data.
24	Section VII - Schedule of Requirements	The proposed Storage System should be Tier1Enterprise Class Mission Critical Storage Array. SAN should be FC enabled and should be in customized rack	Storage Category	Is the equipment to be deployed in existing racks or new racks need to be part of solution.	Equipment should be in purpose build RACK.
25	Section VII - Schedule of Requirements	The proposed active-active data replication solution should support an external arbitration mechanism like Witness at a third site. Solution should be able to support multiple witnesses and these witnesses should preferably be Virtual Witnesses (like a VM on ESXi host) and not physical arrays witness. Connectivity between two active-active data centers and vWitness at third site should be over IP	Storage Category	Can the requirement for witness servers/VMs for active-active data replication be relaxed?	For Active-Active replication any Witness approach will be acceptable without dependencies on additional special hardware.
26	Section VII - Schedule of Requirements	The RFP asks that "Minimum 02 disks per raid group should be spared"	Storage Category	The RFP asks that "Minimum 02 disks per raid group should be spared". For this we will require number of RAID groups to be configured on the SAN Storages?	Raid group will be 06 to 08

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27	Section VII - Schedule of Requirements	Storage appliances should be compatible with Veeam & other enterprise level top backup solutions	Backup Category	Backup software (VEEAM etc) is already deployed at sites?	VEEAM solution will be deployed already in the new datacenter environment.
28	Section VII - Schedule of Requirements	i)The solution should offer In-line/variable length duplication. In case of fix-length duplication, at least 1 PB extra capacity should be added on top of the proposed capacity. Any required deduplication license(s) must be included for target and source-side deduplication. b)The offered solution should be capable to achieve 30X or higher data reduction and should come with license if required.	Backup Category	For Backup Appliance "in case of fix-length deduplication, at least 1 PB extra capacity should be added on top of the proposed capacity." Please clarify the requirement here since the backup appliances are 400TB and 200TB for PR and DR sites respectively.	Storage required is 400TB for PR, 200TB for DR and upgradeable to 1PB. Minimum 30X Data Reduction will be required on data other than images and videos. In case of OEM cannot achieve desire level of Data Reduction at any stage during the contract period, additional capacity should be added on top of proposed solution as per RFB.
29	Section VII - Schedule of Requirements	Should support Media LTO9, LTO8, LTO7	Backup Category	For tape library, drives that support LTO9 and LTO8 tapes don't support LTO7, please confirm if the requirement for LTO7 support can be ignored? or can the requirement be met by having one of the 4 drives support LTO7 and the other 3 drives support LTO9 and LTO8?	LTO 9 Drives are required. LTO9 Tapes support. LTO7 is plus and it is not mandatory.
30	Section VII - Schedule of Requirements	Should support Media LTO9, LTO8, LTO7	Backup Category	Most tape libraries require tape servers (physical machine) for orchestration and control, please confirm if tape server is available with NADRA or it needs to be made part of the solution?	Tapes Server in NADRA have nothing to do with FBR Backup solution. However, FBR does not require physical server in the backup solution.
31	Technical Evaluation (ITB 32.4)	The OEM must be registered with SECP and relevant Tax Authorities in Pakistan. Relevant documentation must be attached with the bid.	SAN & Backup Recovery Appliance	Following up on the pre-bid meeting held on March 26, I would like to bring your attention to the discussion regarding the requirement for Registered OEM Presence in Pakistan and OEM Implementation in Tender published on 18 th of March having subject "PROCUREMENT OF	It is mandatory requirement. Please comply to the RFB requirement.

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				<p>STORAGE AREA NETWORK (SAN) AND ALLIED BACKUP EQUIPMENT FOR FBR'S DATA CENTERS".</p> <p>We would like to inform that In the Pakistan region, global enterprise storage vendors such as Hitachi, HPe, NetApp, Pure Storage etc. typically operate through an indirect, authorized partner-led sales and support model rather than having a direct OEM presence. This approach has been successfully adopted for years to serve mission-critical environments.</p> <p>We, Synergy Computers, being one of the oldest IT solution providers in Pakistan with over 44 years of presence, have been operating effectively through this model. We have a proven track record with large financial institutions such as UBL, 1-Link, SCB, Habib Metro, and others, where we have successfully deployed, supported, and maintained enterprise-grade storage solutions.</p> <p>Given this industry standard, we strongly request that the mandatory OEM presence and support clause be We appreciate your time and consideration on this matter and look forward to your response reconsidered to ensure a fair and competitive bidding process that allows equal participation from all qualified vendors.</p>	
32	Section II – Bid Data Sheet (BDS)	Bid Data Sheet	BDS ITB1.1	Please confirm whether this is a Lotwise (item wise) submission or a Turnkey submission	Please refer to the RFB Section II – Bid Data Sheet (BDS) ITB 1.1

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33	Section IV – Bidding Forms Technical Compliance Sheets Page no. 74, 75	Encryption & De-duplication Method: Sub point 3: Data Reduction Guarantee must for 4:1 or higher must be provided by OEM.	Storage Category	Please clarify that for all the storages (PR, Metro, DR) the Data Reduction Guarantee is 3:1 or 4:1.	Please refer to the technical query response at Serial No: 05
34	Section VII - Schedule of Requirements	Technical Specifications Pg. 124	Backup Category	Please specify type and quantity of tape media to be quoted with Tape Library.	No Tape drives/Media is required in the RFB. However, 05 cleaning Cartridges/Tapes are required.
35	Section VII - Schedule of Requirements	Technical Specifications Pg. 124	Backup Category	LTO7 support is required in the RFP however LTO9 can only support the LTO8 drives but cannot support LTO7. So, it is requested to please reconsider this requirement to LTO 8 support only.	Please refer to the technical query response at Serial No: 30
36	Section VII - Schedule of Requirements	Technical Specifications	Storage Category	Please specify the number of 25KM Long Range SFPs	01 SFP per FC Switch is required.
37	Section VII - Schedule of Requirements	Technical Specification Implementation of the Storage systems must be done by directly OEM. The installation & configuration should be carried out by certified engineers from OEM.	Storage Category	Since Implementation & After Sale support is directly required from OEM with 5 years SLA. Therefore, please confirm that only those OEM can participate in this submission which have an active presence in Pakistan along with their certified solution and support teams to meet the SLA timelines.	Please refer to the RFB section Technical Evaluation (ITB 32.4) Page 51 & Section VII - Schedule of Requirements (Technical Specifications) Point. 19 Implementation
38	Section VII - Schedule of Requirements	Technical Specifications	Storage & Backup Category	Please confirm that Implementation & After Sale support of Backup storage is required from the Bidder (Partner) or Directly from OEM. In Storage, it is required directly from the OEM	The implementation and after sale support services of the Backup Appliance must be done by a direct supplier and the installation & configuration should be carried out by certified engineers from OEM.
39	Section VII - Schedule of Requirements Technical Specifications	Trainings	Storage & Backup Category	Advanced level training is mentioned in multiple categories. Since this is a turnkey solution, could you please confirm the total number of participants which will be trained. And Also confirm that training	Please refer to the RFB requirement, training at OEM certified facilities from OEM for Four (04) personnel on the proposed models and training is to be performed at certified training center of the

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				will be conducted in one batch or multiple batches.	Principal. Advance Level Training is required in multiple batch separately as: 04 Personnels for Enterprise SAN Storage 04 Personnels for Backup & Recovery Appliance
40	Section II – Bid Data Sheet (BDS)	Bid Data Sheet ITB 15.1 & 15.2	Storage Backup Category &	Can we Bid in USD and payment will be made in USD or PKR. If payment is made in PKR, please confirm the conversion detail	Please refer to the RFB Section II – Bid Data Sheet (BDS) ITB 15.1 & 15.2
41	Section VII - of Requirements Technical Specifications	Training Advance level training at OEM certified facilities from OEM for four (4) personnel on the proposed models to be conducted by manufacturer or authorized education partner at certified facilities inclusive of hands-on lab sessions is required. Training should cover operational procedures as well as mapped to authorized certification path for technical personnel. Certification vouchers for proposed training from authorized testing Centre to be included. The training to be performed at the certified training center of the principal.	Storage Backup Category &	Training required is local or international, also confirm the total number of trainees for whole project	Please refer to the RFB requirement, training at OEM certified facilities from OEM for Four (04) personnel on the proposed models and training is to be performed at certified training center of the Principal. Advance Level Training is required in multiple batch separately as: 04 Personnels for Enterprise SAN Storage 04 Personnels for Backup & Recovery Appliance

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42	Section I – to Instructions Bidders (ITB)	4. Eligible Bidders, Page No. 8	SAN & Backup Category	<p>During the pre-bid meeting it was noticed that a prospective bidder was also present who has been actively involved with FBR as consultant. The bidder, being the consultant of FBR, has all the insights into the working of FBR as well as actively involved in drafting the FBR RFPs. Allowing such a bidder in the bidding process would give an unfair advantage over the other bidders and this will jeopardize the overall transparent bidding process of FBR. We would request to consider this and give an equal chance to all the intended bidders. This bidder being the consultant of FBR should be barred from all these bids of FBR</p>	<p>Please refer to the RFB Section-I Page 08. 4. Eligible Bidders 4.1 & 4.2. The technical specifications for this bid have been prepared by FBR in consultation with PRAL Technical Team and no input has been taken from the Consultant.</p>