



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

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

Islamabad, the 28th April, 2025

Subject: 2nd Round - Response of Queries Regarding 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)]

In addition to the technical queries response dated 22.04.2025 uploaded over FBR tender's portal, below are response/ clarification to the additional queries received from different bidders in writing.

Sr.No	RFB Section	Specifications as per RFB	Query Related to Storage/ Backup Category	Queries/Suggestion	Clarifications by FBR
1	Technical Evaluation (ITB 32.4)	The OEM must supply the required enterprise storage solution through its Authorized Partner holding the highest level of partnership in Pakistan. The bidder must have maintained this partnership level for at least one year prior to the bid submission. A manufacturer's authorization letter and a valid partnership level certificate must be submitted with the bid.	SAN & Backup Recovery Appliance	Explanation: OEM Partnership levels vary and oscillate yearly basis and related to the revenue on year closure . Achieving the max level is linked with certain Revenue Closure and maintenance . In a multivendor environment it rare to close with a single OEM . Valid Partnership certificate asked may not be of highest level due to that. Relaxation required: Bidder should be Authorized partner of	This is mandatory requirement in ITB 32.4 section of the RFB. Please comply to the RFB requirement.

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				<p>OEM and submission of partner certificate and MAL/MAF from OEM is a must. Secondly the financial strength is already been shown and will be verified the PO asked and annual turnover of the company.</p> <p>Further More other RFP'S of released by FBR for (PRR Procurement) requires an authorized partner for submission (With Certain financial strength and project closure). Same is requested to be amended in this RFP compliance.</p>	
2	Section VII - Schedule of Requirements Technical Specifications	2 x 10G/25G optical ports per controller are required	Storage Category	<p>As per clause SR#16 which is common in section heading “Enterprise Storage Primary Site” “Enterprise Storage Metro/Bunker Site” “Enterprise Storage DR Site Lahore”, 2 x 10G/25G optical ports per controller are required.</p> <p>Kindly confirm which SFPs are required 10G or 25G?</p>	<p>25G SFPs which have the capability to Auto-negotiate to 10G are required.</p> <p>All port must be fully populated.</p>
3	Section VII - Schedule of Requirements Technical Specifications	2 x 10G/25G optical ports per controller are required	Storage Category	<p>As per clause SR#18 which is common in section heading “Enterprise Storage Primary Site” “Enterprise Storage Metro/Bunker Site”</p>	<p>01 SFP (Long Range) per FC Switch is required.</p>

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				<p>“Enterprise Storage DR Site Lahore”, Long range 32G or higher SFP should be included for Sync replication for at least 25 KM Distance. If 25KM SFP is not supported, other equivalent solution must be provided without additional cost”.</p> <p>Kindly confirm on number of SFPs required?</p>	
4	GCC 28.3 Warranty and support for 5 years after PAT/UAT.	Section IX – Special Conditions of Contract	SAN & Backup Recovery Appliance	<p>As per clause SR#18 which is common in section heading “Enterprise Storage Primary Site” “Enterprise Storage Metro/Bunker Site” “Enterprise Storage DR Site Lahore” “Fiber Cable LC/LC (OM4) 30m x 10, 15m x 20, 10m x 70 multimode per switch, (total 100) for FBR Site and half (50) quantity for DR site”</p> <p>This line is a repetition in all three sections, also Metro/Bunker Site is not mentioned. Total Cables as per requirement should be in quantity 288. Please share revised cable requirements along with appropriate lengths individually per site in the corresponding section for clarity.</p>	<p>Total No. of required Fiber cables is 150. 100 for Primary Site and 50 for the DR site. Specifications/categorization of Fiber Cable is as under:-</p> <p>LC/LC (OM4) Qty:-</p> <p>PR & Metro Site</p> <ol style="list-style-type: none"> 1. 30m x 10 2. 15m x 20 3. 10m x 70 multimode per switch, <p>DR Site</p> <ol style="list-style-type: none"> 1. 30m x 10 2. 15m x 10 3. 10m x 30 multimode per switch

Sr.No	RFB Section	Specifications as per RFB	Query Related to Storage/ Backup Category	Queries/Suggestion	Clarifications by FBR
7	Section VII - Schedule of Requirements Technical Specifications Data Migration from old storage arrays to new storage	15. STORAGE METRO-CLUSTERING/MU LTI- SITE REPLICATION	Storage Category	<p>As per clause SR#19 which is common in section heading “Enterprise Storage Primary Site” “Enterprise Storage Metro/Bunker Site” “Enterprise Storage DR Site Lahore” “Multi-site replication and Data migration from old storage system will be considered integral part of implementation.”</p> <p>Please share old storage details, host server model, current host OS versions, Virtual hypervisor version, quantity of servers, CPU utilization per host, Number of VMs, Number of Physical Hosts.</p>	<p>Overall detail of existing Storages and environment is given below:-</p> <ul style="list-style-type: none"> • 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. • SQL Databases, Oracle Databases, Vmware Datastore, Block & File data etc. • Huawei 2288 and 2488 V5 servers with Fiber channel connectivity. • Hypervisor ESXi7
8	Section VII - Schedule of Requirements Technical Specifications	Scalability • Storage should be scalable up to 1 PB usable capacity or higher without additional hardware/Controller other than disks.	Backup & Recovery Appliance Category	<p>As per clause SR#15 which is in section heading “BACKUP & RECOVERY APPLIANCE – DR SITE – LAHORE (200 TB)”</p> <p>200TB usable capacity at DR with 10% growth rate over 5 years will grow up-to 322TB usable. Kindly shift scalability to 500 or 800TB instead of 1PB which will be more than enough to cater the future growth.</p>	The listed technical specifications are mandatory. Please comply to the RFB requirement.

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9	Section VII - Schedule of Requirements Technical Specifications	Throughput • Can handle at least 25 TB/hr or more throughputs. The appropriate number of deduplication servers and disk types (SSD/SAS) must be proposed/included in case of software-driven deduplication.	Backup Recovery Appliance	As per clause SR#15 which is common in section heading “BACKUP & RECOVERY APPLIANCE – PRIMARY SITE -A (400 TB)” “BACKUP & RECOVERY APPLIANCE – DR SITE – LAHORE (200 TB)” “Can handle at least 25 TB/hr or more throughputs.” Backup throughput requirement is only 25TB/hr which is very low as per the overall requirement of FBR. The current requirement for storing production data is 850TB , which will take 34 Hrs to backup with an appliance having 25TB/Hr throughput, which means backup will never complete as the next day will start. Please change it to at-least 75TB/hr which will reduce the backup window under 12 Hrs.	25TB/hr or more is written in the specifications. It is mandatory requirement please comply to the RFB requirement
10	Section VII - Schedule of Requirements Technical Specifications	Implementation • • Multi-site replication and Data migration from the old storage system will be considered an integral part of the implementation.	Backup Recovery Appliance	As per clause SR#15 which is common in section heading “BACKUP & RECOVERY APPLIANCE – PRIMARY SITE -A (400 TB)” “BACKUP & RECOVERY APPLIANCE – DR	Existing Storage is Huawei 5500 OceanStor Backup strategy includes: - Daily, weekly, and monthly backups of FBR Critical DB.

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				<p>SITE – LAHORE (200 TB)” “ Multi-site replication and Data migration from the old storage system will be considered an integral part of the implementation.”</p> <p>Please share the old storage details and current backup details.</p>	<ul style="list-style-type: none"> - Backup of the most critical production virtual machines. - Replication of virtual machines for enhanced redundancy. <p>Additionally, FBR is using Veeam Backup and Replication (Enterprise Plus) critical data is archived using an IBM TS4300 Tape Library with LTO 7 tapes.</p>

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