

Clarification of Bidders Queries dt. 18.09.2020

ANNEXU RE-1 S/ No	Clause No/ Clause Name/Serial No/ Page No	Clause	Requested Changes	Justification	RailTel Response
1	Clause no (Chapter):-3, 10. Technical Specifications, SOR-A: Storage – A-1 - Unified Storage system of 600 TB, Serial No. :- 1, Page No:- 19	The offered storage should be a true symmetric active-active storage	The offered storage should be true symmetric/asymmetric active- active storage.	Storage System are either based on Asymmetric or Symmetric architecture, offering similar capabilities in terms of performance and overall Storage utilization. It should be noted that as per SCSI protocol LUN/Volume can have only ONE owner, which implies that even having multiple paths active across controllers, only the Controller who owns the LUN/Volume would be able to complete the IO. As the IO has to transverse internally over the Back-End it does induce higher latency compare to IO directly send to a Controller which is active for a specific LUN/Volume and with multipathing Software explicitly or implicitly fail the path in case of any failure. Also, it should be noted that the failover time in both cases might be same due to the fact that once a SCSI session is established the IO would continue to flow over the same session and in case of failure the IO need to be retried on another PATH, which is not an optimized path and similar to situation to Asymmetric Architecture. We request to modify the clause and allow both technologies to participate and allow more participation.	AS per RFP
2	Clause no (Chapter):-3, 10. Technical Specifications, SOR-A: Storage – A-1 - Unified Storage system of 600 TB, Serial No. :- 3, Page No:- 19	The storage should support and be configured with automated data tiering between different drive types namely SSD, SAS, and NL-SAS within the same storage array. The storage should be capable of moving data blocks between these drive types (up and down the tier) depending on the access patterns to ensure optimum storage performance.	The storage should support and be configured with automated data tiering between different drive types namely SSD, SAS, and / NL- SAS within the same storage array. The storage should be capable of moving data blocks between these drive types (up and down the tier) depending on the access patterns to ensure optimum storage performance.	As the RFP have asked for only SSD and NL- SAS we request to have tiering across SSD and NL-SAS or on the proposed drives for this RFP.	In case of single type of drive i.e. SSD/NVMe, no need of tiering, if OEM proposes hybrid storage then tiering among SSD and NLSAS/SAS is required

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3	Chapter:3, 10. Technical Specifications, SOR-A: Storage – A-1 - Unified Storage system of 600 TB, Serial No.:- 6 Page No:- 19	The Storage should support minimum RAID 5, RAID 6 and RAID10 as different applications requires different performance levels	The Storage should support minimum RAID 5/Single Parity, RAID 6/Dual Parity and RAID10/Mirroring as different applications requires different performance levels	RAID Levels offer protection against single disk failure or RAID 5, dual disk failure or RAID 6 and mirroring or 10. Storage system may offer equivalent disk protection as asked RAID levels and hence we request you to please change this clause and accommodate equivalent technologies.	Storage system with equivalent disk protection as asked in terms of RAID levels is also acceptable.
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