

Pre Bid Queries Response for "SITC of 150 TB Storage(All flash Unified) at TPCODL (TPCODL /P&S/2025-26/1000008147)				
Sl. No.	Detailed Reference to Tender Document. Please specify Document No / Clause No	Description as per Bid Document	Remarks - Query / Clarification	TPCODL Response
1	Unified Storage: The proposed storage system must support the provisioning of RAID groups or storage pools to ensure that the storage with proposed RAID configuration can sustain drive failures without any data loss. The maximum number of data drives in any RAID group should be configurable and usable capacity should be calculated by considering maximum drives per RAID group is eight (8), excluding parity and hot spare drives. The hot spare must be capable of automatic rebuild initiation upon drive failure without manual intervention.	The proposed storage system must support the provisioning of RAID groups or storage pools to ensure that the storage with proposed RAID configuration can sustain drive failures without any data loss. The maximum number of data drives in any RAID group should be configurable and usable capacity should be calculated by considering maximum drives per RAID group is eight (8), excluding parity and hot spare drives. The hot spare must be capable of automatic rebuild initiation upon drive failure without manual intervention.	Best Practices of RAID Size varies from OEM to OEM, Defining RAID size limiting to deliver best combination of capacity to performance ratio. Hence request to kindly remove this cluase.	This clause is to be read as follows. <i>"The proposed storage system must support the provisioning of RAID groups or storage pools to ensure that the storage with proposed RAID configuration can sustain drive failures without any data loss. The maximum number of data drives in any RAID group should be configurable and usable capacity should be calculated by considering maximum drives per RAID group is eight (10), excluding parity and hot spare drives. The hot spare must be capable of automatic rebuild initiation upon drive failure without manual intervention."</i>
2	Compatibility: Storage devices should fit in existing 42U Rack with 800mm Width and 1200mm depth		how many RU is available?	This clause is to be read as follows. <i>"Storage devices should fit in existing one number of 42U(Rack Unit) Rack with 800mm Width and 1200mm depth"</i>
3	Migration: The proposed storage solution should support seamless data migration from other storage systems without any data loss.		To be done by Bidder	To be done by Bidder
4	Migration: The bidder shall provide either a native or third-party solution to facilitate data migration from other storage systems as required from day one.		Thrid Party Solution can be proposed by Bidder to facilitate migrartion from third party Storage to NetApp.	To be done by Bidder
5	Service Support & Warranty: Storage solution should have comprehensive 7 years onsite OEM warranty and support for all components including storage drives etc. The warranty period shall commence upon the date of successful completion of the storage implementation, duly certified by the authorized representative of TPCODL.	Storage solution should have comprehensive 7 years onsite OEM warranty and support for all components including storage drives etc. The warranty period shall commence upon the date of successful completion of the storage implementation billing of the storage, duly certified by the authorized representative of TPCODL.		Tender clause stands
6	Service Support & Warranty: Bidder should have back to back business critical support agreement with the OEM for spares, software, hardware and escalation support along with upgrade and updates. 24x7 Support should be available with 1 hour response and 4 hours resolution time. The bidder must establish and maintain all necessary logistics, inventories, OEM coordination, and onsite arrangements required to meet the committed SLA without exception.	Bidder should have back to back business critical support agreement with the OEM for spares, software, hardware and escalation support along with upgrade and updates. 24x7 Support should be available with 1 hour response and 4 hours NBD resolution time. The bidder must establish and maintain all necessary logistics, inventories, OEM coordination, and onsite arrangements required to meet the committed SLA without exception.	NO OEM will provide 4Hr resolution time in oddisa, minimum NBD resolution time will be provided with 1 hr response time. Hence, kindly update clause accordingly.	This clause is to be read as follows. <i>"Bidder should have back to back business critical support agreement with the OEM for spares, software, hardware and escalation support along with upgrade and updates. 24x7 Support should be available with 1 hour response and 8 hours resolution time. The bidder must establish and maintain all necessary logistics, inventories, OEM coordination, and onsite arrangements required to meet the committed SLA without exception."</i>
7	Annexure II, Clause#3	OEM must be in the Gartner magic Leaders quadrant of Solid-State Arrays for at least twice in last 3 years.	Please remove this clause as per Govt. of India guidelines.	Tender clause stands

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8	Annexure II, Clause#8	The All flash Storage system should be unified (Block, File and Object) from day one.	This clause with Block, file and object from single storage system is OEM specific, therefore requesting to remove the object requirement from single storage for wider participation. Therefore, change the clause as below, "The All flash Storage system should be unified (Block and File) from day one."	Tender clause stands
9	Annexure II, Clause#10	The proposed storage system must support the provisioning of RAID groups or storage pools to ensure that the storage with proposed RAID configuration can sustain drive failures without any data loss. The maximum number of data drives in any RAID group should be configurable and usable capacity should be calculated by considering maximum drives per RAID group is eight (8), excluding parity and hot spare drives. The hot spare must be capable of automatic rebuild initiation upon drive failure without manual intervention.	There is restriction of 8 drives for Raid configuration which cannot be enforced on the new system so requesting to change it to industry standard number which is 14 (as all OEMs support Raid 6 with 14D+2P configuration). Therefore, requesting to change the clause as below, " The proposed storage system must support the provisioning of RAID groups or storage pools to ensure that the storage with proposed RAID configuration can sustain drive failures without any data loss. The maximum number of data drives in any RAID group should be configurable and usable capacity should be calculated by considering maximum drives per RAID group is fourteen (14), excluding parity and hot spare drives. The hot spare must be capable of automatic rebuild initiation upon drive failure without manual intervention. . "	This clause is to be read as follows. <i>"The proposed storage system must support the provisioning of RAID groups or storage pools to ensure that the storage with proposed RAID configuration can sustain drive failures without any data loss. The maximum number of data drives in any RAID group should be configurable and usable capacity should be calculated by considering maximum drives per RAID group is eight (10), excluding parity and hot spare drives. The hot spare must be capable of automatic rebuild initiation upon drive failure without manual intervention."</i>
10	Annexure II, Clause#37	For ease of management, storage solution should be able to support Unified integrated offering with management tools having all mentioned protocols FC, iSCSI, CIFS, NFS, S3 etc from day one.	Kindly change this clausealso as clause#1 as below, "For ease of management, storage solution should be able to support with management tool having all mentioned protocols FC,iSCSI, CIFS, NFS etc from day one."	Tender clause stands
11	Annexure II, Clause#43	Solution should be enabled with different interval based (scheduling) replication (synchronous and asynchronous) for each object without capacity limitation from day one.	Different OEM uses replication between sites differently and Hitachi Vantara storage systems offers continuous replication between DC and DR and can help our customer to meet near Zero RPOs with asynchronous replication as against the snapshot based replication which is interval based and is asked here. Therefore, requesting to change the clause as below, "Solution should be enabled with replication (synchronous and asynchronous) for each object without capacity limitation from day one."	This clause is to be read as follows. "Solution should be enabled with different interval based scheduling or continuous replication (synchronous and asynchronous) for each object without capacity limitation from day one.
12	Annexure II, Clause#49	It should provide a single dashboard to monitor health, availability, capacity usage, performance, and data protection status of various platforms along with resource planning.	Kindly change the clause as below by removing requirement of single console , "It should provide dashboard to monitor health, availability, capacity usage, performance, and data protection status of various platforms along with resource planning. "	Tender clause stands
13	Annexure II, Clause#54	The storage should provide 10/20/40 Gbps Ethernet connectivity port (Copper/Fibre based).	Kindly remove the requirement of 20 or 40 Gbps as we support either 10 Gbps or 25 Gbps ports only. So, requesting to remove the clause as different interfaces has already asked in different clause.	This clause is to be read as follows. <i>"The storage should provide 10Gbps or 20 Gbps or 40 Gbps Ethernet connectivity port (Copper or Fibre based)."</i>
14	Annexure II, Clause#56	Storage(SAN, NAS and Object) must have feature to manage remotely via web and command line.	Kindly change the clause as below, "Storage(SAN and NAS) must have feature to manage remotely via web and command linw."	Tender clause stands
15	Annexure II, Clause#68	System should support strong Native/ configurable encryption mechanism for data at rest and data at transit.	What is the ask from data at transit perspective as storage system will be able to provide data-at-rest-encryption and for data in transit encryption the host needs to be configured appropriately. Similarly for NAS workloads, protcol encryption can be used. So, its not storage offering and therefore requesting to remove the data in transit encryptionm and change the clause as below, "System should support strong configurable encryption mechanism for data at rest."	Tender clause stands
16	Unified Storage: Minimum 150 TB usable capacity .	Minimum 138TiB/150 TB usable capacity .	Please allow to quote with 138TiB usable capacity as our systems display capacity in TiB's only. 138TiB is equal to 151TB.	Tender clause stands.Proposed Unified Storage should have minimum 150 TB usable capacity, along with the equivalent usable capacity expressed in TiB.

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17	Unified Storage: The proposed storage system must support the provisioning of RAID groups or storage pools to ensure that the storage with proposed RAID configuration can	The proposed storage system must support the provisioning of RAID groups or storage pools to ensure that the storage with proposed RAID configuration can	We would request you to please allow to create RAID group of minimum 14 drives to optimize the overall solution. As these are NVMe SSD drives which are very fast and has less failure rate as compare to earlier generation SSD and HDD drive hence 14 drive RAID group is very common. Moreover with the current exponential hike in the SSD drives it is better to go with optimize configuration. As NVMe drives are very very expensive hence please allow to bid with 14 drive RAID group size.	This clause is to be read as follows. "The proposed storage system must support the provisioning of RAID groups or storage pools to ensure that the storage with proposed RAID configuration can sustain drive failures without any data loss. The maximum number of data drives in any RAID group should be configurable and usable capacity should be calculated by considering maximum drives per RAID group is eight (8), excluding parity and hot spare drives. The hot spare must be capable of automatic rebuild initiation upon drive failure without manual intervention."
	sustain drive failures without any data loss. The maximum number of data drives in any RAID group should be configurable and usable capacity should be calculated by considering maximum drives per RAID group is eight (8), excluding parity and hot spare	sustain drive failures without any data loss. The maximum number of data drives in any RAID group should be configurable and usable capacity should be calculated by considering maximum drives per RAID group is fourteen (14) , excluding parity and hot spare		
	drives. The hot spare must be capable of automatic rebuild initiation upon drive failure without manual intervention.	drives. The hot spare must be capable of automatic rebuild initiation upon drive failure without manual intervention.		
18	Host Interface: Storage should contain minimum 8 No. of FC (minimum16 Gb/s) ports and minimum 4 No of (minimum 1/10GbE iSCSI) ports per controller.	Storage should contain minimum 8 No. of FC (minimum16 Gb/s)/ 4 No of FC (minimum 32 Gb/s) ports and minimum 4 No of (minimum 1/10GbE iSCSI) ports per controller.	Request you to allow for either 8X16Gb/s or 4X32Gb/s per controller as there will not be any impact of speed even with 4X32Gb/s per controller. Also clarify if you require 10G Base-T iSCSI ports or 10G SFP+ iSCSI ports.	This clause is to be read as follows. " <i>Storage should contain minimum 8 No. of FC (minimum 16 Gb/s) ports or 4 No. of FC (minimum 32Gb/s) ports and minimum 4 No. of (minimum 1/10GbE iSCSI Fiber optic medium) ports per controller.</i> "
19	Disk Type: 1. Drive Capacity – In range of 6 TB to 16 TB	1. Drive Capacity – In range of 6 TB to 16 TB TLC drives.	Please confirm if you require TLC or QLC drives. TLC drives has better reliability than QLC drives.	Tender Clause stands. Drive should be TLC.
	Disk Type: 2. Drive size - 70 x 15 x 100 mm (Form Factor 2.5- inches)	2. Drive size - 70 x 15 x 100 mm (Form Factor 2.5- inches)		
20	ANNEXURE II – Technical Specification Point 10.2: Unified Storage Minimum 150 TB usable capacity.	Minimum 138 TiB / 150 TB usable capacity.The proposed storage system reports usable capacity in TiB (Tebibytes) only. 138 TiB is equivalent to 151 TB , hence we request you to allow quoting with 138 TiB usable capacity.		Tender clause stands.Proposed Unified Storage should have minimum 150 TB usable capacity along with the equivalent usable capacity expressed in TiB.
21	ANNEXURE II – Technical SpecificationPoint 10.3Unified Storage : The proposed storage system must support the provisioning of RAID groups or storage pools to ensure that the storage with proposed RAID configuration can sustain drive failures without any data loss. The maximum number of data drives in any RAID group should be configurable and usable capacity should be calculated by considering maximum drives per RAID group is eight (8), excluding parity and hot spare drives. The hot spare must be capable of automatic rebuild initiation upon drive failure without manual intervention.	The proposed storage system must support the provisioning of RAID groups or storage pools to ensure that the storage with proposed RAID configuration can sustain drive failures without any data loss. The maximum number of data drives in any RAID group should be configurable and usable capacity should be calculated by considering maximum drives per RAID group is fourteen (14), excluding parity and hot spare drives. The hot spare must be capable of automatic rebuild initiation upon drive failure without manual intervention.We request to allow RAID group size of 14 drives to optimize capacity utilization and cost. As the proposed solution uses NVMe TLC SSD drives , which have higher performance and lower failure rates compared to legacy SSD/HDD drives, a 14-drive RAID group is an industry-accepted and commonly deployed configuration. This will help optimize overall solution cost considering the high price of NVMe drives.		This clause is to be read as follows. " <i>The proposed storage system must support the provisioning of RAID groups or storage pools to ensure that the storage with proposed RAID configuration can sustain drive failures without any data loss. The maximum number of data drives in any RAID group should be configurable and usable capacity should be calculated by considering maximum drives per RAID group is eight (10), excluding parity and hot spare drives. The hot spare must be capable of automatic rebuild initiation upon drive failure without manual intervention.</i> "
22	ANNEXURE II – Technical SpecificationPoint 33: Host Interface Storage should contain minimum 8 No. of FC (minimum 16 Gb/s) ports and minimum 4 No. of (minimum 1/10 GbE iSCSI) ports per controller.	Storage should contain minimum 8 No. of FC (minimum 16 Gb/s) ports OR 4 No. of FC (minimum 32 Gb/s) ports and minimum 4 No. of (minimum 1/10 GbE iSCSI) ports per controller.Request you to allow either 8×16 Gb/s FC ports or 4×32 Gb/s FC ports per controller, as both configurations deliver equivalent bandwidth and performance with no functional impact.		This clause is to be read as follows. " <i>Storage should contain minimum 8 No. of FC (minimum 16 Gb/s) ports or 4 No. of FC (minimum 32Gb/s) ports and minimum 4 No. of (minimum 1/10GbE iSCSI Fiber optic medium) ports per controller.</i> "

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23	ANNEXURE II – Technical Specification Point 13 :Disk Type 1. Drive Capacity – In range of 6 TB to 16 TB	Drive Capacity – In range of 6 TB to 16 TB TLC drives.		Tender Clause stands. Drive should be TLC.
	2. Drive size - 70 x 15 x 100 mm (Form Factor 2.5inches)	Drive size – 70 × 15 × 100 mm (Form Factor: 2.5inch)		
		Please confirm if you require TLC or QLC drives.		
		TLC drives has better reliability than QLC drives.		
24	Scope of Work & Service Level Agreement Clause No. 7: Post order issuance, TPCODL will give confirmation to BA for further loading the order to OEM. The delivery timeline for the BA shall be within 4-6 weeks of intimation by TPCODL. Further the Supplied material should be installed, configured and commissioned in all respect within 2 weeks from the date of intimation/delivery. (TPCODL will intimate date to BA for installation of equipment). Delivery will be accepted at TPCODL DR in Bhubaneswar, Odisha, India.	Considering the current OEM manufacturing lead time, supply chain constraints, and logistics involved, especially for imported/critical components, we request that the delivery, installation, configuration, and commissioning timeline be revised to a total period of 12 weeks, inclusive of all activities, from the date of order/intimation by TPCODL.		Tender Clause stands.
25	Annexure II Technical Specification (Pt. 10, Unified Storage	The proposed storage system must support the provisioning of RAID groups or storage pools to ensure that the storage with proposed RAID configuration can sustain drive failures without any data loss. The maximum number of data drives in any RAID group should be configurable and usable capacity should be calculated by considering maximum drives per RAID group is eight (8), excluding parity and hot spare drives. The hot spare must be capable of automatic rebuild initiation upon drive failure without manual intervention.	Request Ammendment as below: "The proposed storage system must support the provisioning of RAID groups or storage pools to ensure that the storage with proposed RAID configuration can sustain drive failures without any data loss. The hot spare must be capable of automatic rebuild initiation upon drive failure without manual intervention".	This clause is to be read as follows. <i>"The proposed storage system must support the provisioning of RAID groups or storage pools to ensure that the storage with proposed RAID configuration can sustain drive failures without any data loss. The maximum number of data drives in any RAID group should be configurable and usable capacity should be calculated by considering maximum drives per RAID group is eight (10), excluding parity and hot spare drives. The hot spare must be capable of automatic rebuild initiation upon drive failure without manual intervention."</i>
26	Annexure II Technical Specification (Pt. 34-35, Compatibility)	Storage devices should fit in existing 42U Rack with 800mm Width and 1200mm depth	how many RU is available?	This clause is to be read as follows. <i>"Storage devices should fit in existing one number of 42U(Rack Unit) Rack with 800mm Width and 1200mm depth "</i>
27	Annexure II Technical Specification (Pt. 61, Service Support and Warranty)	Storage solution should have comprehensive 7 years onsite OEM warranty and support for all components including storage drives etc. The warranty period shall commence upon the date of successful completion of the storage implementation, duly certified by the authorized representative of TPCODL.	Request Ammendment as below: "Storage solution should have comprehensive 7 years onsite OEM warranty and support for all components including storage drives etc. The warranty period shall commence upon the date of successful billing of the storage, duly certified by the authorized representative of TPCODL".	Tender clause stands
28	Annexure II Technical Specification (Pt. 62, Service Support and Warranty)	Bidder should have back to back business critical support agreement with the OEM for spares, software, hardware and escalation support along with upgrade and updates. 24x7 Support should be available with 1 hour response and 4 hours resolution time. The bidder must establish and maintain all necessary logistics, inventories, OEM coordination, and onsite arrangements required to meet the committed SLA without exception.	Request Ammendment as below: "Bidder should have back to back business critical support agreement with the OEM for spares, software, hardware and escalation support along with upgrade and updates. 24x7 Support should be available with 1 hour response and NBD resolution time. The bidder must establish and maintain all necessary logistics, inventories, OEM coordination, and onsite arrangements required to meet the committed SLA without exception".	This clause is to be read as follows. <i>"Bidder should have back to back business critical support agreement with the OEM for spares, software, hardware and escalation support along with upgrade and updates. 24x7 Support should be available with 1 hour response and 8 hours resolution time. The bidder must establish and maintain all necessary logistics, inventories, OEM coordination, and onsite arrangements required to meet the committed SLA without exception."</i>

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29	Annexure II Technical Specification (Pt. 38, Migration)	The proposed storage solution should support seamless data migration from other storage systems without any data loss.	Required Clarity on below Pointers: 1. What is the old storage Model? 2. What is the useable capacity of old system? 3. Please share the details of software licenses on the old system. 4. What is the size of file shares that will be migrated to the new system? 5. Is the migration required within same DC? CIFS need mig at both location? 6. Is there any movement of the new NetApp storage system from one location to other? 7. Is there sufficient Rack space available in the DC where the new system will be installed? 8. Is there sufficient no. of ports on the SAN/IP switches available to connect the new storage? 9. Is there any replication required to be configured to another site? 10.How many hosts will be accessing the new storage?	Tender clause stands. Environment-specific details will be shared with the selected bidder. Bidders are requested to propose the solution based on the RFP requirements. If required, they may visit the site and carry out due diligence.
30	Annexure II Technical Specification (Pt. 39, Migration)	The bidder shall provide either a native or third-party solution to facilitate data migration from other storage systems as required from day one.	Required Clarity on below Pointers: 1. What is the old storage Model? 2. What is the useable capacity of old system? 3. Please share the details of software licenses on the old system. 4. What is the size of file shares that will be migrated to the new system? 5. Is the migration required within same DC? CIFS need mig at both location? 6. Is there any movement of the new NetApp storage system from one location to other? 7. Is there sufficient Rack space available in the DC where the new system will be installed? 8. Is there sufficient no. of ports on the SAN/IP switches available to connect the new storage? 9. Is there any replication required to be configured to another site? 10.How many hosts will be accessing the new storage?	Tender clause stands. Environment-specific details will be shared with the selected bidder. Bidders are requested to propose the solution based on the RFP requirements. If required, they may visit the site and carry out due diligence.
31	Annexure II Technical Specification (Pt. 74, Implementation)	1. Bidders should take responsibility for the end-to-end implementation and configuration of storage, including replication and migration. 2. The bidder is required to perform a comprehensive due diligence of the existing infrastructure to evaluate its suitability and physical capacity for accommodating the proposed storage solution. This assessment must identify any potential constraints or compatibility issues in advance, to ensure a smooth and uninterrupted implementation process.	Do we need to replicate any data from the proposed New Storage to any existing Storage? If yes, then, we will need to provide a 3rd Party Replication tool to migrate the data from New NetApp Storage to any 3rd Party existing storage. Please provide the following inputs: 1. How much data needs to be replicatedm, Capacity (GB/TB). 2. Will both the new & existing storages connect to the same host/server? 3. Are both the new & existing storages connected on the same SAN network? 4. List of OS environment & version on these Hosts/ Servers 5. are there any databases whose data needs to be replicated between these storages? 6. What are the applications whose data needs to be replicated? 7. Is there any RPO/RTO required for this replication between the new & existing storages? 8. How many replications will be configured in a day? 9. Replication from where to where ! 10. Due diligence will be done of exisiting storage to facilitate seamless Migration from older storage to newer Storage, apart of that if there is any scope of work is required kindly specify !!	Tender clause stands. Environment-specific details will be shared with the selected bidder. Bidders are requested to propose the solution based on the RFP requirements. If required, they may visit the site and carry out due diligence.