

Dated: 14.08.2024



रेलटेल कॉर्पोरेशन ऑफ़ इंडिया
(भारत सरकार का एक उपक्रम)

RailTel Corporation of India Ltd.
(A Government of India Enterprise)
Plate-A, 6th Floor, Office Tower-2,
NBCC Building, East Kidwai Nagar,
New Delhi-110023

Website: www.railtelindia.com

Corrigendum-I

Sub: "Supply, Installation, Testing & Commissioning of Data Center Infrastructure at DC & DR of RailTel"

Ref: i) Tender No. RAILTEL/TENDER/OT/CO/ ITP/2024-25/ DC-DR Infra/009 dtd. 22.07.2024

With reference to ref i) RAILTEL/TENDER/OT/CO/ ITP/2024-25/ DC-DR Infra/009 dtd. 22.07.2024, following amendments are issued in the tender as follows:

- Point no. 2, SOR-A, Item No. 1 (Rack Server), 6. Technical Requirement, Chapter-3A (Page no. 18) of Tender document:**

SN.	Component	Original Clause	Revised Clause
		Minimum Requirement Description	Minimum Requirement Description
2	Chipset	Intel latest series compatible with Processor and board.	AMD / Intel latest series compatible with Processor and board.

- Point no. 4, SOR-A, Item No. 1 (Rack Server), 6. Technical Requirement, Chapter-3A (Page no. 18) of Tender document:**

SN.	Component	Original Clause	Revised Clause
		Minimum Requirement Description	Minimum Requirement Description
4	CPU	Configured CPU Should be populated with 2 Nos. of latest generation Intel Xeon Latest Generation CPU, each CPU should be 16 core with 2.3 GHz or better.	Configured CPU Should be populated with 2 Nos. of latest generation AMD EPYC / Intel Xeon Latest Generation CPU, each CPU should be 16 core with 2.3 GHz or better.

3. Point no. 6, SOR-A, Item No. 1 (Rack Server), 6. Technical Requirement, Chapter-3A (Page no. 18) of Tender document:

SN.	Component	Original Clause	Revised Clause
		Minimum Requirement Description	Minimum Requirement Description
6	Memory slots	16 / 32 DDR4 DIMM slots RDIMMS & LR DIMMS supporting speeds at least 3200 MT/s.	12 / 24 DDR4 DIMM slots or better RDIMMS & LR DIMMS supporting speeds at least 3200 MT/s or better.

4. Point no. 7, SOR-A, Item No. 1 (Rack Server), 6. Technical Requirement, Chapter-3A (Page no. 18) of Tender document:

SN.	Component	Original Clause	Revised Clause
		Minimum Requirement Description	Minimum Requirement Description
7	Memory Configured	Configured with 8/4 nos. 16 / 32 GB RDIMM 3200/s (or 128 GB Equivalent), scalable to 1 TB.	Configured with 8/4 nos. 12/ 24 GB RDIMM 3200/s (or 128 GB Equivalent), scalable to 1 TB.

- Response to Pre-bid Queries of DC-DR Infra Tender is attached as Annexure-I.
- The last date of submission of Bid is also extended from 14.08.2024 to 23.08.2024 upto 15:00 hrs. All the submitted bids will be opened at 15:30 hrs on 23.08.2024.
- All other terms & conditions of tender remain same.

Rajeev Kumar
14/08/2024

(Rajeev Kumar)

Sr.DGM/ITP/CO

रेलटेल कॉर्पोरेशन ऑफ इंडिया लिमिटेड (भारत सरकार का उपक्रम)
RailTel Corporation of India Ltd. (A Government of India Undertaking)
CIN : U64202DL2000GOI107905

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SN	Clause no & chapter no	Page no	Content of the tender clause	Change asked by the firm	Justification by the firm	RailTel Response/Clarification
1	chapter-4, 12. Qualification Criteria >> 12.1. Eligibility Criteria for Bidder >> 12.1.1. Bidder >> S.No. 5. Bidder Type	43	The Bidder or their promoters having equity stake or operating partnership in bidder, should not be holding valid License for Telecom service provider/ISP/ NLD, Services License of Government of India for Telecom Operation. Undertaking to be submitted by the Bidder	We humbly request you to kindly delete this clause since there is no ISP related activity involved in the scope of work. Moreover, connectivity is managed by Railtel itself as mentioned in the RFP document. This will also facilitate additional competitive and responsive bidders in your current and future RFPs.		As per tender
2	6 (6.1), Chapter 3-A, Chipset	18	Intel latest series compatible with Processor and board	AMD / Intel latest series compatible with Processor and board	Make RFP/Tender Generic	Please see corrigendum
3	6(6.1), Chapter 3-A, CPU	18	CPU Configured CPU Should be populated with 2 Nos. of latest generation Intel Xeon Latest Generation CPU, each CPU should be 16 core with 2.3 GHz or better.	Configured CPU Should be populated with 2 Nos. of latest generation AMD EPYC / Intel Xeon Latest Generation CPU, each CPU should be 16 core with 2.3 GHz or better.	Make RFP/Tender Generic	Please see corrigendum
4	6(6.1), Chapter 3-A, Memory Slot	18	16 / 32 DDR4 DIMM slots RDIMMS & LR DIMMS supporting speeds at least 3200 MT/s.	12 / 24 DDR4 DIMM slots RDIMMS & LR DIMMS supporting speeds at least 4800 MT/s.	AMD & Intel Both will Qualify & fulfil your requirement	Please see corrigendum
5	6(6.1), Chapter 3-A, Memory Configured	18	Configured with 8/4 nos. 16 / 32 GB RDIMM 3200/s (or 128 GB Equivalent), scalable to 1 TB.	Configured with 8/4 nos. 12 / 24 GB RDIMM 4800/s (or 128 GB Equivalent), scalable to 1 TB.	AMD & Intel Both will Qualify & fulfil your requirement	Please see corrigendum
6	6(6.1), Chapter 3-A, General Requirement	18	SAP Certification: Server should be SAP HANA certified	SAP Certification: Server should be SAP / SAP HANA certified	Make RFP/Tender Generic	As per tender
7	3, Chapter 3-A	25	HCI Compute Nodes:Solution must be proposed with at least 320 physical cores (2.4GHz) in 5 nos of HCI Appliance or Higher. 5 TB total usable memory, 76 TB SAS SSD and 240 TB SAS usable storage without considering any deduplication, compression, erasure coding or any saving techniques benefits. Complete solution must be proposed with one node failure, should be delivered the 40000 or more IOPS per node with 8Kb Block size. Offered HCI Solution should have license for DR automation and replication license for 125 & more VMs from day	Kindly reduced the requested CPU frequency to 2.2 GHz, as higher frequencies are not available with Intel Xeon processors in this category. Additionally, could you please clarify if the 1024 GB of memory should include the HCI software overheads, or if it should be in addition to those overheads? Regarding storage, please specify if the 125 TB usable capacity is required with Replication Factor 2, as the currently provided configurations are for raw capacity.	CPU Frequency: The requested CPU frequency should be reduced to 2.2 GHz. The higher frequency specified in the original request is not available with the Intel Xeon processors within the specified category. This adjustment ensures that the CPU specifications are aligned with the capabilities of the available hardware, allowing for optimal performance within the given constraints. Memory Clarification: We require clarification regarding the 1024 GB memory specification per node & Total 5TB Across 5 Nodes, Specifically, we need to know if this memory requirement should include the HCI (Hyper-Converged Infrastructure) software overheads, or if it should be exclusive of these overheads. This clarification is essential for accurate provisioning and to ensure that the system can efficiently handle the intended workloads without performance degradation. Storage Capacity Specification: Regarding storage, the current configurations provided specify raw capacity. We need confirmation if the required 125 TB should be the usable capacity. Usable capacity takes into account factors such as Replication Factor overheads and data protection mechanisms, which reduce the total available storage space. Providing this clarification will ensure that the storage configuration meets the actual data storage needs and performance expectations.	Refer to all capacity as raw. The usable capacity, accounting for node failures and replication factors, will be determined as per solution during deployment
8	6.2.1: SOR-A, Item No. 2 (Virtualization Solution), Chapter-3A	20	For all the components of proposed software solution stack, licenses should be transferrable to hardware from any vendor in case of hardware OL & EOS or nonavailability.	Change To: For all the components of proposed software solution stack, licenses should be transferrable to hardware from any generation to latest generation from vendor in case of hardware EOL & EOS or nonavailability.	Kindly amend this clause for larger participation	As per tender
9	6.3.2: SOR-A, Item No. 3 (Hyper Converged Infrastructure), Chapter-3A	25	HCI solution should support for hosting their SDS (Software Define Storage) component with choice of servers hardware available from leading OEM's (at least 3).	HCI solution should support for hosting their SDS (Software Define Storage) component with choice of servers hardware available from leading OEM's (at least 3), respective OEM.	Kindly amend this clause for larger participation	As per tender
10	6.3.4: SOR-A, Item No. 3 (Hyper Converged Infrastructure), Chapter-3A	26	Supplied hypervisor must have all the enterprise functionalities like HA, DRS (Distributed Resource Scheduler) and vMotion etc.	Supplied hypervisor must have all the enterprise functionalities like Proactive HA, DRS (Distributed Resource Scheduler) and vMotion etc.	Kindly amend this clause for larger participation	As per tender
11	6.3.5: SOR-A, Item No. 3 (Hyper Converged Infrastructure), Chapter-3A	26	HCI solution should support more than one hypervisor with cloud native integration (Container)/Open stack	HCI solution should support proposed hypervisor with cloud native integration (Container)/Open stack	Kindly amend this clause for larger participation	As per tender
12	6.3.6: SOR-A, Item No. 3 (Hyper Converged Infrastructure), Chapter-3A	26	HCI solution should support NVMe, SSD, SAS & NLSAS disks without compromising any of enterprises storage efficiency provided by stack	HCI solution should support NVMe / SSD / SAS / NLSAS disks without compromising any of enterprises storage efficiency provided by stack	Kindly amend this clause for larger participation	As per tender
13	6.3.7: SOR-A, Item No. 3 (Hyper Converged Infrastructure), Chapter-3A	26	HCI solution must provide on the fly change of ESE (Enterprise Storage Efficiency) - Deduplication/Compression for workload without any visible impact on storage and their operations	Storage efficiency solutions are not recommended to run on sas nlsas disks as these disks are best suited to provide capacity but not for these additional operations. we suggest to ask for these capabilities on ssd/nvme only and remove this clause as you have asked for sas disks in usable capacity. or provide bidder to quote all flash	Kindly amend this clause for larger participation	As per tender
14	6.3.9: SOR-A, Item No. 3 (Hyper Converged Infrastructure), Chapter-3A	26	HCI solution should support leveraging external physical servers access to HCI storage using native iSCSI with highly available connectivity using HCI native load balanced and distributed data architecture across all nodes in cluster.	HCI solution should support leveraging external physical servers access to HCI storage using native iSCSI and FC with highly available connectivity using HCI native load balanced and distributed data architecture across all nodes in cluster.	Kindly amend this clause for larger participation	As per tender
15	6.3.10: SOR-A, Item No. 3 (Hyper Converged Infrastructure), Chapter-3A	26	HCI solution should support WAN Bandwidth optimizer along with defined schedule across two sites and only increment data should be replicated post one time data sync.	Change To: HCI solution should support defining replication schedule across two sites and only increment data should be replicated post one time data sync Reason: With the change in infrastructure and technologies and available bandwidth options today there is no value that Wan optimization solutions brings. we suggest to ask that solution provide capability to replicate only incremental data by tracking the changed blocks	Kindly amend this clause for larger participation	As per tender
16	6.3.13: SOR-A, Item No. 3 (Hyper Converged Infrastructure), Chapter-3A	26	Solution should support native file storage supporting NFS v3/v4 and SMB 2.0/3.0 for Linux and Windows Guest with unlimited shares integrated with Active directory/LDAP.	Change To: Solution should support native file storage supporting NFS v3/v4 and SMB 2.0/3.0 for Linux and Windows Guest integrated with Active directory/LDAP. Reason: Unlimited shares is favouring a respective vendor. kindly help amend the comment Modification: please delete this specification.	Kindly amend this clause for larger participation	As per tender
17	Clause 3 of App level security - Virtual firewall, Chapter-3A	26	Solution should provide network micro segmentation using integration with existing stateful virtual firewall.	Reason: Solution itself provides capability of Micro segmentation. This will cause duplicity for the micro-segmentation within solution and will increase the solution cost without any functional benefit. Modification: please delete this specification.	Kindly amend this clause for larger participation	As per tender
18	Clause 4 of App level security - Virtual firewall, Chapter-3A	26	The solution should provide this micro segmentation management using the existing HCI management platform.	Reason: Security Management is a separate domain and it should not be mixed with HCI management as best practice and this is favouring one single OEM, we request to remove this clause and make it neutral for wider participation	Kindly amend this clause for larger participation	As per tender

19	Clause 5 of App level security - Virtual firewall, Chapter-3A	26	Solution should provide creation of security groups and security policies/rules based on parameters like virtual machine name/OS type/IP addresses/Security Tags etc.	We suggest the solution should support applying security policies on security groups as well as individual workloads for flexibility in case of such requirements in production	Kindly consider our suggestion for larger participation	As per tender
20	Clause 9 of App level security - Virtual firewall, Chapter-3A	27	Solution should support VM's life cycle policy-based firewall rules for east west traffic across VM's through one management console without any third party software.	Security Management is a separate domain and it should not be mixed with HCl management as best practice and this is favouring one single OEM, we request to remove this clause and make it neutral for wider participation	Kindly amend this clause for larger participation	As per tender
21	Clause 18 of App level security - Virtual firewall, Chapter-3A	27	Support for external 3rd party SAN storage for ease of migration from SAN environment to HCl.	We understand that you are looking for support of HCl nodes to connect with external storage available at Railtel on FC for ease of migration between SAN and HCl env for ease of migrations. Kindly suggest if our understanding is correct.	Kindly confirm for more understanding about this clause	As per tender
22	6.3.2: SOR-A,Item No. 3 (Hyper Converged Infrastructure), Chapter-3A	25	HCl Compute Nodes: Solution must be proposed with at least 320 physical cores (2.4Ghz) in 5 nos of HCl Appliance or Higher. 5 TB total usable memory. 76 TB SAS SSD and 240 TB SAS usable storage without considering any deduplication, compression, erasure coding or any saving techniques benefits. Complete solution must be proposed with one node failure. should be delivered the 40000 or more IOPS per node with 8Kb Block size. Offered HCl Solution should have license for DR automation and replication license for 125 & more VMs from day1.	HCl Compute Nodes: Solution must be proposed with at least 320 physical cores (2.4Ghz) in 5 nos of HCl Appliance or Higher. 5 TB total usable memory. 76 TB SAS SSD and 240 TB SAS usable 316 TB storage without considering any deduplication, compression, erasure coding or any saving techniques benefits. Complete solution must be proposed with one node failure. should be delivered the 40000 or more IOPS per node with 8Kb Block size. Offered HCl Solution should have license for DR automation and replication license for 125 & 50 50 or more VMs from day1. Reason: 1. Hybrid drives (SSD + NLSAS) in single HCl Cluster is OEM Specific feature that restricts all the other major HCl OEMs from participation. Request to kindly either change to All-Flash Storage, or allow external Storage to provide NLSAS Capacity to the HCl Cluster. 2. In order to have balanced memory config, raw memory in the multiple of 1024 must be mentioned. for usable memory please mention atleast Raw memory - 10%. 3. Usually customers place maximum 8-10 VMs per Node. Hence request to please mention 50 VMs license for the DR Automation for BOQ optimization.	Kindly amend this clause for larger participation	Refer to all capacity as raw. The usable capacity, accounting for node failures and replication factors, will be determined as per solution during deployment
23	Clause-3, Chapter-3A	25	HCl Compute Nodes:Solution must be proposed with at least 320 physical cores (2.4Ghz) in 5 nos of HCl Appliance or Higher. 5 TB total usable memory. 76 TB SAS SSD and 240 TB SAS usable storage without considering any deduplication, compression, erasure coding or any saving techniques benefits. Complete solution must be proposed with one node failure. should be delivered the 40000 or more IOPS per node with 8Kb Block size. Offered HCl Solution should have license for DR automation and replication license for 125 & more VMs from day	Kindly reduced the requested CPU frequency to 2.2 GHz, as higher frequencies are not available with Intel Xeon processors in this category. Additionally, could you please clarify if the 1024 GB of memory should include the HCl software overheads, or if it should be in addition to those overheads? Regarding storage, please specify if the 125 TB usable capacity is required with Replication Factor 2, as the currently provided configurations are for raw capacity.	CPU Frequency: The requested CPU frequency should be reduced to 2.2 GHz. The higher frequency specified in the original request is not available with the Intel Xeon processors within the specified category. This adjustment ensures that the CPU specifications are aligned with the capabilities of the available hardware, allowing for optimal performance within the given constraints. Memory Clarification: We require clarification regarding the 1024 GB memory specification per node & Total 5TB Across 5 Nodes, Specifically, we need to know if this memory requirement should include the HCl (Hyper-Converged Infrastructure) software overheads, or if it should be exclusive of these overheads. This clarification is essential for accurate provisioning and to ensure that the system can efficiently handle the intended workloads without performance degradation. Storage Capacity Specification: Regarding storage, the current configurations provided specify raw capacity. We need confirmation if the required 125 TB should be the usable capacity. Usable capacity takes into account factors such as Replication Factor overheads and data protection mechanisms, which reduce the total available storage space. <u>Providing this clarification will ensure that the storage</u>	Refer to all capacity as raw. The usable capacity, accounting for node failures and replication factors, will be determined as per solution during deployment
24	6.3.3, Chapter-3A	25	HCl Compute Nodes: Solution must be proposed with at least 320 physical cores (2.4Ghz) in 5 nos of HCl Appliance or Higher. 5 TB total usable memory. 76 TB SAS SSD and 240 TB SAS usable storage without considering any deduplication, compression, erasure coding or any saving techniques benefits. Complete solution must be proposed with one node failure. should be delivered the 40000 or more IOPS per node with 8Kb Block size. Offered HCl Solution should have license for DR automation and replication license for 125 & more VMs from day1.	HCl Compute Nodes: Solution must be proposed with at least 320 physical cores (2.4Ghz) in 5 nos of HCl Appliance or Higher. 5 TB total usable memory. 76 TB SAS SSD and 240 TB SAS SSD usable storage without considering any deduplication, compression, erasure coding or any saving techniques benefits. Complete solution must be proposed with one node failure. should be delivered the 40000 or more IOPS per node with 8Kb Block size. Offered HCl Solution should have license for DR automation and replication license for 125 & more VMs from day1.	Justification: Every OEM has their own architecture. Please allow the amendment for wider participation	Refer to all capacity as raw. The usable capacity, accounting for node failures and replication factors, will be determined as per solution during deployment
25	6.3.6, Chapter-3A	26	HCl solution should support NVMe, SSD, SAS & NLSAS disks without compromising any of enterprises storage efficiency provided by stack	HCl solution should support NVMe/SSD/SAS /NLSAS disks without compromising any of enterprises storage efficiency provided by stack	Justification: Every OEM has their own architecture. Please allow the amendment for wider participation	As per tender
26	App level security - Virtual firewall Point 4, Chapter-3A	26	The solution should provide this micro segmentation management using the existing HCl management platform.	Remove the clause	Justification: This is OEM Specific and giving undue advantage to one particular OEM	As per tender
27	App level security - Virtual firewall Point 5, Chapter-3A	26	Solution should provide creation of security groups and security policies/rules based on parameters like virtual machine name/OS type/IP addresses/Security Tags etc.	Clarification Required	Can it be fulfilled as part of existing ACI infrastructure?	As per tender
28	App level security - Virtual firewall Point 11, Chapter-3A	27	Solution should have zero trust policy model for connected systems or hosts.	Clarification Required	Can it be fulfilled as part of existing ACI infrastructure?	As per tender
29	App level security - Virtual firewall Point 12, Chapter-3A	27	Solution should support traffic flows visualization with context of end-to-end Network Visibility. from the VM, to the virtual NIC all the way to the top-of-rack switch port with health and performance of the network.	Clarification Required	Can it be fulfilled as part of existing ACI infrastructure?	As per tender
30	App level security - Virtual firewall Point 13, Chapter-3A	27	Solution should provide network analysis solution to collect and analyze network flows in real time and put them in the context of the VMs and applications which are originating from or terminating to. Users should easily understand who is talking to whom and what flows need to be allowed or blocked.	Clarification Required	Can it be fulfilled as part of existing ACI infrastructure?	As per tender

31	Additional Point			The solution should support Single click non-disruptive rolling upgrades of HCI software and system firmware's. The solution should have pre-built task libraries for Day 0 automation of infrastructure , to to configure Servers , Storage and network.	Additional Clause. Justification: Monitoring for end to end hardware and virtualized environment	
32	Additional Point			The solution should also provision for proposed network switches, storage , firewalls and load balancers to ensure seamless provisioning..	Additional Clause. Justification: Monitoring for end to end hardware and virtualized environment for both servers and switches.	
33	NIT, EMD	3	Earnest Money (EMD): Rs 12.62/- Lakhs to be made in favor of RailTel Corporation of India Ltd. online through e-nivida Portal	Can we get an Exemption form EMD Rs.12.62 Lakhs as our organization registered with MSME / UDAYM / NSIC registered Organizations; Please clarify	Can we get an Exemption form EMD Rs.12.62 Lakhs as our organization registered with MSME / UDAYM / NSIC registered Organizations; Please clarify	As per tender
34	Point no 3.5 of Clause No 3, Objective of Chapter-3-A	15	Enable seamless integration with existing systems and future expansions.	Please provide the detailed Information of Existing RAITEL's Hardware and Software Application which enable us to offer a compatible solution for your requirement against following points mentioned in RAITEL RFP		Migration from existing oracle cloud to new proposed solution.
35	Point no 4.1 of Clause No 4, HCI Solution Design of Chapter-3-A	15	HCI Solution Design: Ensure compatibility with existing systems and future scalability.			
36	Point no 4.2 of Clause No 4, Integration	16	Integration with Existing Systems: Migrate			