

Corrigendum - III

Supply, Installation, Testing & Commissioning for Expansion of
Cloud Infrastructure Storage, Backup and End Point Security
of Data Center (DC & DR) of RailTel for
Indian Railway e-Office Project



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Corrigendum-III for Expansion of Cloud Infrastructure Storage, Backup and End Point Security of Data Center (DC & DR) of RailTel for Indian Railway e-Office Project.

In reference to Supply, Installation, Testing & Commissioning for Expansion of Cloud Infrastructure Storage, Backup and End Point Security of Data Center (DC & DR) of RailTel for Indian Railway e-Office Project against Tender No. RAILTEL/TENDER/OT/CO/ITP/2020-21/DC Infra Solution/540 dt 16.07.2020, all are advised to note following changes in the RFP document:

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1.	BDS of Chapter-5 'Earnest Money Deposit'	Earnest Money Deposit (EMD)/ Bid Security: Rs 36,06,000/- (Rs. Thirty Six Lakh Six Thousand only).	Earnest Money Deposit (EMD)/ Bid Security: Rs 35,68,500/- (Rs. Thirty Five Lakh Sixty Eight Thousand Five Hundred only) to be made in favor of RailTel online through IREPS Portal.
2.	Point No. 3 (i) 'DESIGN GUIDELINES' of Chapter-3 C.	Equipment shall conform to the similar housing standards and shall preferably be integrated in one 19"/21" rack.	Equipment shall conform to the similar housing standards and shall preferably be integrated in one 19" rack.
3.	SOR-E of Schedule of Requirement of Chapter-2	Incremental% AMC cost in addition to 3.5 % mentioned in clause 3 of Chapter-4	Incremental AMC charges per annum in INR (After Expiry of warranty) in addition to 3.5 % mentioned in clause 3 of Chapter-4
4.	Clause 3.2 of Chapter-4, Long Term Maintenance Support.	Material for replacement shall be handed over to/taken over from contractors engineer at the RailTel's NOC or mutually agreed RailTel PoP location. The cost of replacement etc. shall be included in the quoted bid price during warranty period. During this period, the contractor shall remain responsible to arrange replacement within a week and for setting right at his own cost any equipment which is of defective manufacturing or design or becomes unworkable due to any cause whatsoever. The decision of the RailTel's representative in this regard to direct the contractor to attend to any damage or defect in work shall be final and binding on the Contractor	Material for replacement shall be handed over to/taken over from contractors engineer at the RailTel's NOC or mutually agreed RailTel PoP location. The cost of replacement etc. shall be included in the quoted bid price during warranty period. During this period, the contractor shall remain responsible to arrange replacement within next business day and for setting right at his own cost any equipment which is of defective manufacturing or design or becomes unworkable due to any cause whatsoever. The decision of the RailTel's representative in this regard to direct the contractor to attend to any damage or defect in work shall be final and binding on the Contractor

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5.	Clause 3.5 of Chapter-4, Long Term Maintenance Support.	Tenderer/OEM, shall be paid @ 3.5% of supply cost per annum towards Long Term Maintenance Support after completion of warranty period, to undertake repairs/replacements of all type of module/card/assembly/ subassembly and update/upgrade of software released during this period and /or which may fail in the network after the warranty. Only incremental cost in % over and above this, if perceived by the OEM and Tenderer, may be indicated in Schedule of Requirement and shall be added towards evaluation of tender. If however the tenderer feels that his AMC Cost is less than 3.5% per annum, he should give suitable discount in equipment pricing. For AMC he will be paid @ 3.5% per annum only. If the Tenderer quotes a higher base rate for AMC, he will be paid at his quoted rate per annum and five-year differential cost shall be added to offered cost. AMC would have to be valid for minimum period of 5 years after the warranty. In case a tenderer quotes AMC rates lower than 3.5%, no advantage will be given to him for evaluation purposes. In case the tenderer wins the contract, his product cost will be reduced by differential (w.r.t. 3.5%) AMC rates for five years& he will be paid accordingly. AMC charges to him, however, be paid only @ 3.5% per annum on quoted product price.	Tenderer/OEM, shall be paid @ 3.5% of supply cost per annum towards Long Term Maintenance Support after completion of warranty period, to undertake repairs/replacements of all type of module/card/assembly/ subassembly and update/upgrade of software released during this period and /or which may fail in the network after the warranty. Only incremental cost in INR over and above this, if perceived by the OEM and Tenderer, may be indicated in Schedule of Requirement and shall be added towards evaluation of tender. If however the tenderer feels that his AMC Cost is less than 3.5% per annum, he should give suitable discount in equipment pricing. For AMC he will be paid @ 3.5% per annum only. If the Tenderer quotes a higher base rate for AMC, he will be paid at his quoted rate per annum and five-year differential cost shall be added to offered cost. AMC would have to be valid for minimum period of 5 years after the warranty. In case a tenderer quotes AMC rates lower than 3.5%, no advantage will be given to him for evaluation purposes. In case the tenderer wins the contract, his product cost will be reduced by differential (w.r.t. 3.5%) AMC rates for five years& he will be paid accordingly. AMC charges to him, however, be paid only @ 3.5% per annum on quoted product price.
6.	Added New sub clause 3.8 under clause 3 “Long Term maintenance Support” of Chapter-4.		The PBG submitted against main order (LOA/PO) shall be released after submission of PBG against AMC LOA/PO, start of AMC from OEM’s after expiry of warranty and reconfirmation letter from OEM for 05 years AMC support.
7.	Form No. 3 of Chapter-6	PROFORMA FOR THE LONG-TERM MAINTENANCE SUPPORT	PROFORMA FOR THE LONG-TERM MAINTENANCE SUPPORT to be signed by OEM and bidder both.

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8.	Clause-4 of Chapter-5, Bid Data Sheet.	Delivery Period: Delivery and supervision of installation and commissioning within 120 days of issue of LOA/PO.	Delivery Period: Supply, Installation, Testing and commissioning within 120 days of issue of LOA/PO.
9.	Clause 12.1.2 "Eligibility Criteria for OEM" of Chapter-4.	The OEM should have supplied at least 35% of the tendered value/SOR Value of the equipment offered or equipment of the same series/family during last preceding 3 financial years (i.e. current year and three previous financial years) as on opening of bid to Government/PSUs/Telecom Service Providers. OEM should submit self-certificate with proper contact detail of clients along with PO reference and amount supplied (Firm Name, Contact person, Designation, Telephone Number, Fax, Official mail id etc.). The same should be issued by authorized signatory.	The OEM should have supplied at least 35% of the SOR Quantity/SOR Value of the equipment offered or equipment of the same series/family during last preceding 3 financial years (i.e. current year and three previous financial years) as on opening of bid to Government/PSUs/Telecom Service Providers/ Tier-III Data Centres . OEM should submit self-certificate with proper contact detail of clients along with PO reference and amount supplied (Firm Name, Contact person, Designation, Telephone Number, Fax, Official mail id etc.). The same should be issued by authorized signatory.
10.	Clause 12.2.5 of Chapter-4 and BDS of Chapter-5	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	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/Data Center, Services License of Government of India for Telecom Operation
11.	Added New Clause 12.2.7 of Chapter-4 and BDS of Chapter-5		The bidder should have a positive net worth during last 03 FY. Certificate for the same duly verified from CA need to be submitted along with offer.
12.	Added New clause No. 45 as "Additional Security clauses for Tenders" of Chapter-4,		"Additional Security clauses for Tenders" Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. "Bidder" (including the term 'tendered', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium, every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.

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			“Bidder from a country which shares a land border with India” for the purpose of this Order means:- An entity incorporated, established or registered in such a country; or A subsidiary of an entity incorporated, established or registered in such a country; or An entity substantially controlled through entities incorporated, established or registered in such a country; or An entity whose beneficial owner is situated in such a country; or An Indian (or other) agent of such an entity; or A natural person who is a citizen of such a country; or A consortium or joint venture where any member of the consortium or joint venture falls under any of the above. The beneficial owner for the purpose of (iii) above will be as under: In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means. Explanation- “Controlling ownership interest” means ownership of or entitlement to more than twenty-five percent of shares or capital or profits of the company; “Control” shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements; In case of a partnership firm, the beneficial owner is the natural persons(s) who, whether acting alone or together, or through one or more juridical person, has ownership of

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			entitlement to more than fifteen percent of capital or profits of the partnership: In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals; Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official; In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership. An agent is a person employed to do any act for another, or to represent another in dealings with third person. The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with Competent Authority i.e. DPIIT. Undertaking regarding such clause need to submit in the format given below: Certificate to be provided by Tenderer on his letter head. “I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority, I hereby certify that this bidder fulfils all requirements in this regard and is eligible to be considered. [Where applicable, evidence of

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			valid registration by the Competent Authority shall be attached.]” Certificate for Tenderer for Works involving possibility of sub-contracting “I have read the clause regarding restrictions on procurement from a bidder/OEM of a country which shares a land border with India and on sub-contracting to contractors from such countries; I certify that this bidder/OEM is not from such a country or, if from such a country, has been registered with the Competent Authority and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. I hereby certify that this bidder/OEM fulfils all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]” Note: i. The said instructions will not apply to the bidders from those countries (even if sharing a land border with India) to which the Government of India has extended lines of credit or in which the Govt. Of India is engaged in development projects. Updated list of countries to which line of credit have been extended or in which development projects are undertaken are given in the website of the Ministry of external affairs. ii. Any discrepancy between above mentioned clause and guidelines issued from Public Procurement Division of Department of Expenditure under Ministry of Finance vide letter no. F. No. 6/18/2019-PPD dt. 23.07.2020 later will be applicable.

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13.	Added New clause No. 46 as “ Contract Management ” of Chapter-4,		Contract Management: On completion of the selection process, LOA/PO will be issued in favor of selected bidder. RailTel will enter into a contract agreement with the selected bidder(s). The Contract Agreement shall be entered by RailTel only after submission of valid Performance Guarantee by the successful bidder. The following documents would form part of the agreement between RailTel & the successful bidder: - i). This Request for Proposal and all the issued addendum/ corrigendum. ii). The bidder’s proposal in response to this RFP and clarifications made in course of evaluation, including all Appendixes and supporting documents. iii). Issued LOA/PO. iv). Performance Bank Guarantee submitted by firm against LOA/PO. v). The implementation plan identifying the tasks to be completed, the assigned responsibilities and the scheduled completion dates. vi). The agreement shall commence from the date of issue of LoA/PO
14.	Added New clause No. 47 as “ Contract Management ” of Chapter-4,		CONSORTIUM BIDS 1.1 In view of nature of work covered in the Bid documents, it is anticipated that some of the intending tenderers will pool their resources and experience to form consortia. Consortium bids are permitted with each consortia of tenderers allowed to have at maximum two members, the consortia of tenderers

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			must clearly define the lead bidder of the consortia along with its roles and responsibilities. 1.2 The Lead bidder should have experience of execution of similar works (Definition of similar work is as per the clause 12.2.1 of Chapter 4). In their own interest the tenderers who form such a consortia are advised to investigate capabilities, availability of resources, experienced personnel, financial soundness, past experience and concurrent engagements of constituting partners. 1.3 Consortia of tenderers, if any, must clearly define role/scope of work of each partner/member. Further the legal agreement for a consortium must accompany the bid and should clearly define the leader of such a consortium who will be the contractor and will be responsible for timely completion of work as also during execution of work, if awarded, coordinate with Purchaser on behalf of the consortium, receive payments for the works executed and be liable for due performance of the contract in all respect. 1.4 Qualification documents, details etc. must however, be provided for each member firm complete in all respects. 1.5 A consortium formed will not be subject to alteration with regard to change in constituting firms and/or reorientation of roles. Any changes, if proposed by consortium to take advantage of certain developments during evaluation stage will render the bid liable to be rejected. As all details are required to be furnished along with the bids and will be critically examined during evaluation of bids, it is imperative that such details should have been thoroughly examined as a safeguard against a possible disqualification of bids on these grounds. 1.6 All partners of the consortium shall be jointly and severally liable to RailTel for the execution of the entire contract in accordance with its terms.

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			1.7 In case of consortium bids by Indian Company with foreign Company as one of the consortium partner, bidder has to quote price in INR and Payments shall be made in Indian Rupees only. 1.8 Consortium shall not have more than two members and each consortium member shall have minimum 30% contribution in the work. A Consortium must submit a Power of Attorney by the other member of the Consortium in favor of the Lead Member. This is also to be enshrined in Memorandum of Agreement signed by the Consortium Members and submitted along with the bid. Members of consortium should sign every sheet of price bid as a token of acceptance of all quoted prices by members, failing which the offer will stand summarily rejected. 1.9 An individual bidder or a member of Consortium cannot be a member of another Consortium and participate in this tender. 1.10 Firms should submit the affidavit (As per Form-8) & Consortium Agreement (As per Form-9) along with the bid/offer. 1.11 Each consortium member shall make equal contribution towards the total PBG amount to be submitted along with acceptance of LOA. 1.12 The Lead Bidder shall be the prime point of contact for RailTel and shall be primarily responsible for the discharge and administration of all the obligations for this project. The sole responsibility under the contract would be that of the Lead Bidder only. 1.13 The Lead Bidder shall be required to submit a joint agreement between the consortium members for the contract. The Lead Bidder participating with consortium approach shall

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			define the role of each consortium member in the RFP response clearly indicating their scope of work or responsibilities and relationship. 1.14 Each member's relevant turnover combined together shall be considered against financial capability criteria mentioned in Clause 12.2.2 of Chapter-4. Lead bidder should meet minimum 70% of financial capability criteria. 1.15 Positive net worth of the Lead Bidder shall be considered for evaluation purpose
15	Clause 21 of Chapter-4	Preference to make in India: The provisions of Public Procurement (Preference to Make in India), Order-2017 dt. 15.06.2017 or latest is applicable.	Preference to make in India: The provisions of Public Procurement (Preference to Make in India), Order2017 dt. 15.06.2017 (or subsequent revisions, if any) is applicable or latest. Office Memorandum dated 19.02.2020 (or latest) issued by Department of Telecommunications, Ministry of Communications shall be applicable for Clause 10 (d) of Public procurement (Preference to Make in India) Order, 2017."
Technical Queries Response:			
1.	SOR-A-2, SCHEDULE OF REQUIREMENT of Chapter-2	Backup Solution at DC and DR along with Tape/Disk Based storage as per specification given in Chapter-3A	Backup Solution at DC & DR along with Disk based storage as per specification given in Chapter-3A
2.	Point No. 2 (vii) 'Solution Building Block' of Chapter-3 A	Core router for DC & DR	"deleted"
3.	Point Ni. 4 (xvi) 'Scope of Work' of Chapter-3 A	VMware vSAN 6 or latest Enterprise for 1 Processor or equivalent - 105 Nos.	VMware vSAN Advanced 6 or latest for 1 Processor or equivalent - 105 Nos.
4.	Point Ni. 4 (xvi) 'Scope of Work' of Chapter-3 A	VMware Site Recovery Manager Standard Latest edition (25 VM Pack) or equivalent -6 Nos.	VMware Site Recovery Manager Enterprise Latest edition (25 VM Pack) -6 Nos.

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5.	Point No. 2 of SOR-A-1 'Unified Storage system of 600 TB' of Chapter 3 A	The Storage Systems should be supplied with minimum 600TB Usable capacity using 500 TB capacity on SAS/NLSAS Drives on RAID6 and 100TB using SSD on RAID 6 and scalable up to 1PetaByte usable capacity using SAS/SSD.	The Storage Systems should be supplied with minimum 600TB Usable capacity using 500TB capacity on SAS/NL-SAS/NVMe/SSD Drives on RAID6 and 100TB using SSD on RAID 6. Additional capacity required in SOR B-B1 may be added here and scalable upto 2 PetaByte usable capacity on SAS/NL-SAS/SSD/NVMe.
6.	Point No. 17 of SOR-A-1 'Unified Storage system of 600 TB' of Chapter 3 A	The proposed storage system should support at least 24000 LUNs or volumes	The proposed storage system should support at least 6000 LUNs or volumes
7.	Point No. 25 (I) of SOR-A-1 'Storage Management Features' of Chapter 3 A	Proposed storage system should support third-party storage virtualization natively or using another headers in High availability from day1. Necessary licenses and hardware on High availability should be supplied from day1.	Proposed storage system should support third-party storage virtualization natively or using another headers in High availability from day1. Necessary licenses and hardware on High availability should be supplied from day1. Any third party solution is also acceptable to achieve this feature for data migration.
8.	Point No. 1 of SOR-A-2 'Backup solution at DC & DR' of Chapter 3 A	Backup software proposed should be in Gartner's leader quadrant of the latest gartner Magic Quadrant report for Data Protection / Backup Software.	Backup software proposed should be in Gartner's leader quadrant of the latest gartner Magic Quadrant report for Data Center Backup & Recovery Solution.
9.	Point No. 2 of SOR-A-2 'Backup solution at DC & DR' of Chapter 3 A	The proposed Backup software must be offered for 200 virtual machines or host / CPU based licensing both at DC & DR.	The proposed Backup software must be offered for 150 virtual machines or host / CPU based licensing both at DC & DR.
10.	Point No. 4 of SOR-A-2 'Backup solution at DC & DR' of Chapter 3 A	Backup software should be totally agentless but should support application aware backups for MS SQL, Oracle, SAP HANA, Exchange transaction logs with non-staged granular recovery of all these applications. It should support crash consistent VM level backup for all other workloads.	Backup software should be totally agentless with VM image level backup and should support application aware backups for MS SQL, Oracle, SAP HANA, PostgreSQL, MySQL, Mongo DB, Exchange transaction logs with non-staged granular recovery of all these applications. It should support crash consistent VM level backup.
11.	Point No. 5 of SOR-A-2 'Backup solution at DC & DR' of Chapter 3 A	The Data protection services should be hosted on Scale out solution using software defined storage. The solution should be Multi-controller architecture to be quoted with 4 controllers/Nodes having 256GB Cache/Memory per Controller/Node.	The Data protection services should be hosted on Scale out solution using software defined storage or equivalent . The solution should be Multi-controller architecture to be quoted with 4 controllers/Nodes having 256GB Cache/RAM per Controller/Node.

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12.	Point No. 6 of SOR-A-2 'Backup solution at DC & DR' of Chapter 3 A	Backup solution should be provided for 500TB usable Disk based backup storage capacity (only at DC) leveraging 10TB NL-SAS drives on erasure coding or equivalent with protection of data against simultaneous 2 (Two) disk Failure with rack awareness and encryption functionality.	Backup solution should be provided for 500TB usable Disk based backup storage capacity (only at DC) leveraging 8 /10 TB NL-SAS drives on erasure coding or equivalent with protection of data against simultaneous 2 (Two) disk Failure with rack awareness and encryption functionality.
13.	Point No. 8 of SOR-A-2 'Backup solution at DC & DR' of Chapter 3 A	The Software defined storage solution should provide multiprotocol support NFS, SMB & S3 and should have native protection from ransomware attacks or include third party antivirus scanning system using ICAP protocol any hardware required should be quoted from day 1	The Software defined storage solution or equivalent should provide multiprotocol support NFS, SMB & S3 and should have native protection from ransomware attacks or include third party antivirus scanning system.
14.	Point No. 11 of SOR-A-2 'Backup solution at DC & DR' of Chapter 3 A	Backup software should have integrated data de-duplication engine with multi-vendor storage support to save space by storing de-duplicated copies of data. The deduplication engine should also facilitate IP base replication of de-dupe data. All necessary hardware and software required to support this functionality should be supplied along with other components	Backup solution should have integrated data de-duplication engine to save space by storing de-duplicated copies of data . The deduplication engine should also facilitate IP base replication of de-dupe data. All necessary hardware and software required to support this functionality should be supplied along with other components.
15.	Point No. 13 of SOR-A-2 'Backup solution at DC & DR' of Chapter 3 A	Backup software must have a feature of data validation, whereby a workload is powered-on in a sandbox environment and tested for its recoverability.	Backup solution must have a feature of data validation, where data validation is done as a process and tested for its recoverability.
16.	Point No. 19 of SOR-A-2 'Backup solution at DC & DR' of Chapter 3 A	The proposed Backup software must allow to configure the maximum acceptable I/O latency level for production data stores to ensure backup and replication activities do not impact storage Availability to production workloads	"Deleted"
17.	Point No. 14 of SOR-A-3 'SAN Switch' of Chapter 3 A	Proposed switch should be NVMe ready to allow seamless transition to related workloads without any SAN switch upgrade.	"Deleted"
18.	Point No. 15 of SOR-A-3 'SAN Switch' of Chapter 3 A	Switch should support secure boot to allow only OEM's Genuine software to be loaded on switches.	Switch should allow only Genuine Software to be loaded on switches.

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19.	Added New Note under SOR A-4 of Chapter 3 A		Open Standard/ Third party HBA Card is acceptable. OEM authorization for the same is not required. However, its bidder responsibility to provide support during the contract as per tender requirement.
20.	Point No. 8 of SOR-B-1 'Rack Server' of Chapter 3 A	RAID Controller: 12Gbps PCIe 3.0 with RAID 1, 5, 6,10, 50 with 2GB cache	RAID Controller: 12Gbps PCIe 3.0 with RAID 1, 5, 6,10, 50 with 2GB cache. OR 12Gbps PCIe 3.0 SAS HBA.
21.	Point No. 9 of SOR-B-1 'Rack Server' of Chapter 3 A	2 nos. of 960GB SATA M.2 in mirrored configuration for OS 2 nos. of 3200 GB 3X Endurance SAS SSD for Caching. 8 nos. 8TB 12G 7.2K NL-SAS/SAS drives for Capacity Combination	i. 2 nos. of 960GB SATA M.2 / SATA SSD in mirrored configuration for OS ii. 2 nos. of 3200 GB 3X Endurance SAS SSD for Caching. iii. 8 nos. 8TB 12G 7.2K NL-SAS/SAS drives for Capacity Combination
22.	Point No. 20 of SOR-B-1 'Rack Server' of Chapter 3 A	Intrusion alert in case chassis cover being opened. Material required for Installation and commissioning of Servers in Data center to be supplied by Bidder (Patch cords, cable Management Arm, Rail Kit, transceivers, patch cable connectors etc.) Basic server installation and management training to be provided by the OEM or Authorized distributor/Partner of OEM. vSAN Server resources are factored for Application & Data requirements (includes HCI overheads). Resources for all additional software and solutions to be included separately and clearly defined in the solution document. For server data storage 16x60= 960TB. Additional storage capacity of each server (80-64=16) TB should be arranged in SAN storage for the proposed solution. Each data center needs to be provisioned with 480TB usable capacity using 6TB or less NL-SAS drives on RAID6 in offered storage solution.	i. Intrusion alert in case chassis cover being opened. ii. Material required for Installation and commissioning of Servers in Data center to be supplied by Bidder (Patch cords, cable Management Arm, Rail Kit, transceivers, patch cable connectors etc.) iii. Basic server installation and management training to be provided by the OEM or Authorized distributor/Partner of OEM. iv. vSAN Server resources are factored for Application & Data requirements (includes HCI overheads). Resources for all additional software and solutions to be included separately and clearly defined in the solution document. v. Total storage capacity of each server is considered here as 64 TB. Additional storage capacity (80TB-64TB=16TB) of each server to be provisioned in SAN storage of Unified storage system (SOR-A: Storage-A-1) at DC and DR considering 30 servers to be deployed at each locations. i.e. SAN storage at each Date Centre needs to be provisioned with 480TB usable capacity using max. 6TB NL-SAS drive or SAS/NVMe/SSD drive of any capacity on RAID6. However, in the SAN storage min. 10% SSD (48 TB usable capacity at each location)

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			caching should be provisioned additionally along with storage capacity on SAS/NLSAS/NVMe/SSD.
23.	Point No. 5 of SOR-B-2 'Leaf Switch for Server Connectivity' of Chapter-3 A & Point No. 5 of SOR-C-1 'Leaf Switch of Chapter-3 A	The switching OEM should be part of latest Gartner's Leader Quadrant for Data Center networking.	The switching OEM should be part of latest Gartner's Leaders/Challengers/Visionaries Quadrant for Data Center networking.
24.	Point No. 30 of SOR-B-2 'Leaf Switch for Server Connectivity' of Chapter-3 A	Switch should support basic Multicast IGMP v1, v2, v3.	Switch should support basic Multicast IGMP v1 / v2, v3.
25.	Point No. 41-c of SOR-B-2 'Leaf Switch for Server Connectivity' of Chapter-3 A	IGMP v1, v2 and v3	Switch should support basic Multicast IGMP v1 / v2, v3.
26.	Point No. 44 of SOR-B-2 'Leaf Switch for Server Connectivity' of Chapter-3 A	Switch should support for BFD For Fast Failure Detection as per RFC 5880	Switch should support for BFD For Fast Failure Detection as per RFC 5880 or latest.
27.	Point No. 59 of SOR-B-3 'Software Define Storage Virtualization Virtual Cloud Foundation & Site Recovery License' of Chapter-3 A	There should be single portal to manage all the Cloud based management software using single sign on functionality.	There should be single portal to manage all the Cloud based management software using single sign on functionality for 20 Users.
28.	Point No. 30 of SOR-C-1 'Leaf Switch' of Chapter-3 A	Switch should support basic Multicast IGMP v1, v2, v3.	Switch should support basic Multicast IGMP v1 / v2, v3.
29.	Point No. 41-c of SOR-C-1 'Leaf Switch' of Chapter-3 A	IGMP v1, v2 and v3	Switch should support basic Multicast IGMP v1 / v2, v3.

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30.	Point No. 44 of SOR-C-1 'Leaf Switch' of Chapter-3 A	Switch should support for BFD For Fast Failure Detection as per RFC 5880	Switch should support for BFD For Fast Failure Detection as per RFC 5880 or latest.
31.	Point No. 5 of SOR-C-2 'End Point Protection' of Chapter-3 A	The proposed solution shall utilize layered and defense in depth approach, wherein the solution cannot be of the same make as existing endpoint AV	The proposed solution shall utilised layered and defence in depth approach.
32.	Point No. 9 of SOR-C-2 'End Point Protection for end user' of Chapter-3 A	Software footprint should be small <50MB and should support interactive and/or silent install. Total of 39000 Licenses should be factored for this End Points from Day- 1. Proposed solution should support 100,000 concurrent end points from day-1 by purchasing additional Lic in future.	Software footprint should be small and support interactive and/or silent install. Total of 38985 Licenses should be factored for this End Points from Day- 1. Proposed solution should support 100,000 concurrent end points from day-1 by purchasing additional Lic in future.
33.	Point No. 26 of SOR-C-2 'End Point Protection for end user' of Chapter-3 A	The solution shall be capable of working in Windows, Windows Server & Linux operating systems	The solution shall be capable of working in Windows, Windows Server, Linux operating systems, Mac Systems .
34.	Point No. 27 of SOR-C-2 'End Point Protection for end user' of Chapter-3 A	The endpoint solution shall be able to pinpoint vulnerable versions of popular applications installed in Endpoints	The endpoint solution shall be able to block vulnerable versions of malicious applications/ process to installed in Endpoints.
35.	Point No. 32 of SOR-C-2 'End Point Protection for end user' of Chapter-3 A	Solution should allow Users to choose to preview the new Policy UI.	"Deleted"
36.	SOR-D, of Chapter-3 A	SOR –D Licenses for OS, DB and NMS/EMS: Bidder is required to supply latest versions of the following software at Data Centre (GGN-DC, SC-DC,) as per below mentioned qty- Microsoft Windows Server Standard 2019 R2 subscription license 24 core – 10 Nos.	SOR –D Licenses for OS, DB and Monitoring Solution: Bidder is required to supply latest versions of the following software at Data Centre (GGN-DC, SC-DC,) as per below mentioned qty- i) Microsoft Windows Server Latest Version Standard Edition 16 core pack – 10 Nos. or 2 core pack – 80 Nos.

SN	RFP Reference	Original Version	Modified Version
		- MS - SQLSvrStdCore 2017 SNGL MVL 2Lic CoreLic 2 Core Licenses- 10 Nos. - RHEL for Virtual Data center (Standard support)- 60 Nos. - Multi domain SSL certificates – 4 Nos. - EDB PostGre SQL support system for DB servers - 860 Nos. Bidder shall ensure that latest versions of above mentioned software are supplied. All software licenses shall be perpetual in their scope and in the name of “RailTel”. The bidder will ensure that all costs with respect to upgrades/updates etc of all perpetual license software being procured in this tender are borne by the bidder	ii) Microsoft SQL Server Latest Version Standard license per 2 core – 10 Nos. iii) RHEL for Virtual Data center-Unlimited Guest with Premium support- 60 Nos. iv) Multi domain SSL certificates – 4 Nos. v) EDB PostGre SQL support system for DB servers - 860 Cores. Bidder shall ensure that latest versions of above mentioned software are supplied. All software licenses shall be perpetual in their scope as far as possible and in the name of “RailTel”. The Bidder will ensure that all costs with respect to upgrades/updates etc of all licenses/perpetual licenses software being procured in this tender are borne by the bidder
37.	General Functionalities under Multifactor Authentication	The proposed solution should support soft token (TOTP) / Hardware Token / Push Notification (SMS) / Email / App Based etc.	The proposed solution should support soft token (TOTP) / Hardware Token / Push Notification (SMS) / Email / App Based / Biometric etc.
38.	Solution Specification of SOR-D of Chapter-3 A	The proposed solution should be able to be deployed in virtual environments such as VMware, LPAR or Hyper-V.	Any component of the proposed solution should be deployed on an Windows or Linux VM running on VMWare, Hyper-V or LPAR hypervisor.
39.		The Authentication Mechanism should provide capabilities to prevent Brute Force Attacks and should be able to send alerts to the Admin/Helpdesk in case of a brute force attack on a user account.	“Deleted”
40.	Added New Point 4-xvii “Scope of work” of Chapter-3 A		Necessary arrangement and Coordination with OEM will be the responsibility of bidder.
41.	Added New Point 4-xviii “Scope of work” of Chapter-3 A		Bidder must ensure that all cloud solution components including software defined storage, cloud management Platform, SDN & Site Recovery software should be from

SN	RFP Reference	Original Version	Modified Version
			same OEM and should seamlessly integrate with the existing Infrastructure as per requirement.

Note: List of assets inventory is attached as Annexure-A

The last date of submission of bids is extended from 01.09.2020 to 08.09.2020 up to 15.00 Hrs. Tender will be opened at 15:30 Hrs. on 08.09.2020

All other term & conditions of tender documents will remain same.

(Haritima Jaipurkar)

General Manager/ITP

Annexure-A

Sl. No.	Vmware Product	Installed Component	Secunderabad DC	Gurugram DC	Remarks
1	vSphere	ESXi Hypervisor	24	10	
2	vCenter	vCenter	1	1	VCHA – 3 No's
3	NSX-v	NSX Controller	3	0	
4		NSX Manager	1	1	
5		Universal Distributed Logical Router-MPLS	2	2	NSX Edge Appliance
6		Edge Service Gateway (ESG)-MPLS	2	2	NSX Edge Appliance
7		Universal Distributed Logical Router-Firewall	2	0	NSX Edge Appliance
8		Edge Service Gateway (ESG)-Firewall	2	0	NSX Edge Appliance
9	Site Recovery Manager (SRM)	SRM Appliance	1	1	
10		vSphere Replication Appliance	1	1	
11	vRealize Automation (vRA)	vRealize Automation Appliance	3	0	
12		vRealize Automation Distributed Execution Manager (DEM)	3	0	
13		vRealize Automation SQL Database Server	2	0	
14		vRealize Automation Web Server	2	0	
15		vRealize Automation Proxy Server	0	2	
16		vRealize Automation Management Load Balancer	2	0	NSX Edge Appliance
17		vRealize Operations Manager Management Load Balancer	2	0	NSX Edge Appliance
18		vRealize Suite Life Cycle Manager Appliance	1	0	
19	vRealize Business (vRB)	vRealize Business Appliance for Cloud	1	0	
20	vRealize Log Insight (vRLI)	vRealize Log Insight Appliance Master Node	1	1	
21		vRealize Log Insight Appliance Worker Node	2	2	
22	vRealize Operations Manager (vROPS)	vRealize Operations Manager Appliance Master Node	1	0	
23		vRealize Operations Manager Appliance Master Replica Node	1	0	
24		vRealize Operations Manager Appliance Data Node	1	0	
25		vRealize Operations Manager Appliance Remote Collector	2	2	
26	Miscellaneous	SkyLine Virtual Appliance	1	0	
27		Application Remote Collector Appliance	1	0	
28		Active Directory Server	2	0	
29		NTP Server	1	1	

30	Backup Solution	Veam Backup (270 VM)	1	0	
		(Veam availability suite)			
		10.0.0.4461 P2			
31	Spine Model (Existing)	Cisco N9K-C9364C	2	2	
32	Leaf Model (Existing)	Cisco N9K-C93180YC-FX	2	2	
33	APIC Controller	Cisco -APIC Version 4.1 (1i)	3	3	
33	San Switch (Existing)	Cisco MDS 9148 FC	2	2	
34	Existing Server Model	Dell R740XD vSAN Ready Node	24	10	
34	Existing Server Model for HBA Card (Dual Port)	Dell R740XD vSAN Ready Node	N/A	10	