



रेलटेल कॉर्पोरेशन ऑफ इंडिया लिमिटेड
(भारत सरकार का एक उपक्रम)

RAILTEL CORPORATION OF INDIA LIMITED
(A Govt. of India Undertaking)

ELECTRONIC TENDER DOCUMENT

FOR

रेलटेल के लिए स्विच और स्मार्ट रैक की आपूर्ति, स्थापना, परीक्षण और
कमीशनिंग

**“Supply, Installation, Testing & Commissioning of Switches and Smart Rack for
RailTel”**

E-निविदा संख्या: RailTel/e-Tender/OT/SR/DC/2024-25/04

E-Tender No. RailTel/e-Tender/OT/SR/DC/2024-25/04

(Single Packet System)

Sold to _____



RailTel Corporation of India Ltd.

6A, 6th Floor, Gumidelli Towers, Sardar Patel Rd, Old Patigadda, Prakash Nagar,
Begumpet, Hyderabad, Telangana 500016
P:040-27788000, F: 040-27820682

खुली E-निविदा न.: RailTel/e-Tender/OT/SR/DC/2024-25/04

Dated: 30.07.2024

रेलटेल कॉर्पोरेशन ऑफ इंडिया लिमिटेड (रेलटेल) " रेलटेल के लिए स्विच और स्मार्ट रैक की आपूर्ति, स्थापना, परीक्षण और कमीशनिंग " के लिए ई-टेंडर आमंत्रित करता है।

क)	निविदा डाउनलोड करने की प्रारंभिक तिथि	30.07.2024
ख)	बोली प्रस्तुत करने की अंतिम तिथि और समय	13.08.2024 को 15.00 बजे तक.
ग)	ई-बिड खुलने की तिथि और समय	13.08.2024 को 15.30 बजे.
घ)	निविदा की अनुमानित लागत	रु. 4,13,68,527.00
ङ)	बयाना राशि (ईएमडी)#	रु. 8,27,400/- का भुगतान ई-निविदा पोर्टल के माध्यम से ऑनलाइन किया जाना है।
च)	बोलीदाता(ओं)/ओईएम(ओं) को अपने प्रश्न प्रस्तुत करने की अंतिम तिथि	05.08.2024 तक (समयसीमा 18:00 बजे के बाद इस तिथि के बाद प्राप्त प्रश्नों पर उत्तर के लिए विचार नहीं किया जाएगा)
छ)	ईएमडी के लिए छूट	कृपया पैरा नं. देखें. 20.7 एवं 20.8 अध्याय-4 (वाणिज्यिक नियम एवं शर्तें)

नोट: निविदा सूचना और निविदा प्रलेख रेलटेल की वेबसाइट पर उपलब्ध हैं और www.railtelindia.com या ई-टेंडरिंग पोर्टल <https://www.railtel.enivida.com> से डाउनलोड किए जा सकते हैं। ऑनलाइन बोली जमा करने के लिए निविदाकर्ता को पोर्टल <https://www.railtel.enivida.com> से निविदा प्रलेख की आधिकारिक ऑनलाइन प्रतिडाउनलोड करनी होगी। सभी भविष्य की जानकारी अर्थात् इस निविदा के लिए शुद्धिपत्र / परिशिष्ट / संशोधन आदि निविदा केवल ई-टेंडरिंग पोर्टल पर पोस्ट की जाएगी। रेलटेल कार्यालय से निविदा प्रलेख की मुद्रित प्रति नहीं बेची जाएगी।

बोली दाता तैयारी, बोली की तैयारी/प्रस्तुति /भागीदारी से संबंधित सभी लागतों को वहन करेगा। रेलटेल किसी भी तरह से आचरण या परिणाम की उदासीनता से इन लागतों के लिए जिम्मेदार या उत्तरदायी नहीं होगा।

संयुक्त महाप्रबंधक/डीसी एवं टीपी/एससी



RailTel Corporation of India Ltd.

6A, 6th Floor, Gumidelli Towers, Sardar Patel Rd, Old Patigadda, Prakash Nagar,
Begumpet, Hyderabad, Telangana 500016
P:040-27788000, F: 040-27820682

Open E-Tender Notice No.: RailTel/e-Tender/OT/SR/DC/2024-25/04
Dtd. 30.07.2024

RailTel Corporation of India Ltd. (RailTel) invites E-Tenders for “**Supply, Installation, Testing & Commissioning of Switches and Smart Rack for RailTel**”.

a)	Opening date of Tender downloading	30.07.2024
b)	Last date for submission of bids	13.08.2024 up-to 15:00 Hrs. (Online)
c)	Opening of bids	13.08.2024 at 15:30 Hrs. (Online)
d)	Estimated Cost of Tender	Rs.4,13,68,527.00
e)	Earnest Money (EMD)#	Rs.8,27,400/- to be paid online through e-nivida Portal.
f)	Last date for submission of queries	Till 05.08.2024 (Queries received beyond this date with timeline 18:00 Hrs will not be considered for reply)
g)	Exemption for EMD	Please see para no. 20.7 & 20.8 Chapter-4 (Commercial Terms & Conditions)

Note: Tender Notice and Tender Document are available on RailTel’s website and can be downloaded from www.railtelindia.com or from the e-Tendering portal <https://railtel.enivida.com/>. For online bid submission the bidder will have to necessarily download an official online copy of the tender documents from e-nivida portal. All future Information viz. corrigendum /addendum/ amendments etc. for this Tender shall be posted on the e-Tendering Portal only. Printed copy of Tender document will not be sold from RailTel office.

The bidder shall bear all costs associated with the preparation, submission/participation in the bid. Purchaser in no way will be responsible or liable for these costs regardless of the conduct or outcome of the bidding process.

Joint General Manager/DC&TP/SC

INDEX

Chapter	Contents	Page No.
Chapter 1	Offer letter	5
Chapter 2	Schedule of Requirement	6-7
Chapter 2A	E- Tendering instructions to bidders	8-11
Chapter 3	A. Scope of Work & Technical Requirement.	12-27
	B. INSPECTION AND INSTALLATION, TESTING & COMMISSIONING	28-32
	C. TRAINING, VENDOR DATA REQUIREMENT, DOCUMENTATION, AND DESIGN GUIDELINES	33
Chapter 4	Commercial Terms and Conditions	34-53
Chapter 5	Bid Data Sheet (BDS)	54
Chapter 6	Form No. 1: Performa for Performance Bank Guarantee	55-56
	Form No. 2: Performa for System Performance Guarantee	57
	Form No. 3: Performa for Affidavit to be submitted by tenderer	58-59
	Form No. 4: Performa for Manufacturer Authorization Form	60
	Form No. 5: Performa for Long term Maintenance Support	61
	Form No. 6: Format for Power of Attorney	62
	Form No. 7: Undertaking from OEM	63-64
	Form No. 8: Performa for Nil Deviation	65
	Form No. 9: Contract Agreement	66-67
		Form No. 10: Make in India Certificate

CHAPTER-1

OFFER LETTER

To
Executive Director,
RailTel Corporation of India Limited
6A, 6th Floor, Gumidelli Towers,
Sardar Patel Rd, Old Patigadda,
Prakash Nagar, Begumpet,
Hyderabad, Telangana 500016

Ref: RailTel/e-Tender/OT/SR/DC/2024-25/04 date:26.07.2024

1. I/We _____ have read the various conditions detailed in tender documents attached here to and hereby agree to ABIDE BY THE SAID CONDITIONS. I/We also agree to keep this offer open for acceptance for a period of **90 days** from the date of submission and in default thereof. I/We will be liable for forfeiture of my/our Earnest Money. I/We offer to supply various equipment at the rates quoted in the attached schedules and hereby bind myself/ourselves to complete the work within **120 days** from the date of issue of Purchase Order/LOA. I/We also hereby agree to abide by the Various Conditions of Contract and to carry out the supplies according to the Specifications for materials and works laid down by the RailTel.

2. A sum of Rs. _____ (___amount in words___) through e-Nivida Portal herewith submitted as **“EMD”**. The full value of Earnest Money shall stand forfeited without prejudice to any other rights or remedies if,

I/We withdraw or modify the offer within validity period or do not deposit the security deposit (Performance Bank Guarantee) within **specified days as per tender** after issue of Purchase Order/LOA.

or

I/We do not execute the contract agreement within 15 days after receipt of notice issued by the RailTel that such documents are ready,

or

I/We do not commence the work within 15 days after receipt of orders to that effect.

Until a formal agreement is prepared and executed the acceptance of this tender document shall constitute a binding contract between us subject to modifications, as may be mutually agreed to between us and indicated in the “Letter of Acceptance” of my/our offer for this work.

SIGNATURE OF ONTRACTOR (S)

Date

CONTRACTOR (S) ADDRESS

SIGNATURE OF WITNESS

1.

2

**CHAPTER- 2
SCHEDULE OF REQUIREMENT**

SOR	ITEM DESCRIPTION	UOM	QTY	Unit Rate (All inclusive) (in Rs.)		Total Cost (All inclusive) (in Rs.)	
				In Fig	In word	In Fig	In word
Supply of Items							
1	Supply, Installation and commissioning of ToR Switch with minimum 24 port 10Gbps with 3 years support . Including Installation and Commissioning (I&C) (Specifications 3.2 Technical Requirement – TOR Switch)	Nos	02				
1A	Supply, Installation and commissioning of SFP's 10 G (for sl no.1)	Nos	48				
1B	Supply, Installation and commissioning of SFP's 100 G (for sl no.1)	Nos	8				
2	Leaf Switches with minimum 48 Port 10 Gbps with 3-year support Including Installation and Commissioning (I&C) (Specifications 3.1 Technical Requirement – Leaf Switch) Make & Model : CISCO N9K-C93180YC-FX	Nos	12				
2A	Supply, Installation and commissioning of SFP's 10 G (for sl no.2)	Nos	576				
2B	Supply, Installation and commissioning of SFP's 100 G (for sl no.2)	Nos	72				
3	Supply, Installation and commissioning of Smart Rack (19", 42U) with Fire Suppression, UPS, Accessories, CVR (Air Condition), RDU (Central Monitoring) with 5 nos of IT Racks with 3 Years Support (Specifications 3.3 Technical Requirement – Smart Rack)	No	1				
4	Supply, Installation and commissioning of Unified NAS Storage 64 TB usable with 3 years support (Specifications 3.4 Technical Requirement – NAS Storage)	No	8				
5	Supply, Installation and commissioning of Backup Solution with 5 years support (Specifications 3.5 Technical Requirement – Backup Solution)	No	8				
6	Supply, Installation and commissioning of Backup Solution with 3 years support (Specifications 3.5 Technical Requirement – Backup Solution)	No	2				
7	Supply and Installation OS Data center edition 2 core - Windows server 2022/Latest with 3 years support (Specifications 3.6 Technical Requirement – Windows Server edition)	No	72				
Grand Total							
Grand Total (In Words):							

Note :

- 1) Sl No. 1 can quote any, but sharing of the Make and Model is must for evaluation of their bids. Bids received without make and model for Sl No.1, summarily rejected.
- 2) Vendors must quote the sl no.2 as per Make & Model only, other model will not consider for evaluation and their offer summarily rejected.
- 3) All necessary cables and connectors and other accessories required for installation (which require MPO cables for leaf to spine connectivity in same floor etc.)

Note:	
I.	<p>a) Unit rate quoted against SOR above should be CIP destination inclusive of all duties, taxes, insurance and freight etc. (with tax break-up as per Performa attached as Annexure-A). The materials as per SOR are required to be delivered within the delivery period as indicated in Bid Data Sheet (BDS, Chapter 5).</p> <p>b) It shall be the responsibility of Tenderer to transport the equipment to site for Installation & Commissioning.</p>
II.	Tenderers should submit the detailed configuration of each type of equipment indicating quantities of various modules/sub modules/cards/Licenses/sub racks including the vacant slots in the sub racks/chassis for further expansion. Detail BOM of each equipment supplied under the contract shall be submitted along with the bid and the same shall be duly vetted by the OEM.
III.	The Tenderer shall attach Unit Rate Analysis of Schedule of Requirements (cost of each sub-assembly, card, module, Licenses etc.) in their Price Bid. The quoted Unit Rates should correspond to the referred unit Rate
IV.	<p>Non-compliance of following will lead to summarily rejection of Bidders bid:</p> <p>i. Tender Cost and EMD.</p> <p>ii. Exemption of EMD application as given in tender clause (EMD)</p>
V.	Tenderer must also furnish unit rate of all the supply of items mentioned in the SOR, which will be required for the Solution. These will also form part of the Rate Contract for procurement of items as when required.
VI.	<p>The tenderer will be fully responsible for Supply of Equipment/hardware/software cards/interfaces/license and all related items for installation and commissioning of the network including the following:</p> <p>a) Integration with existing SDN (ACI) infrastructure as required by RailTel.</p> <p>b) Spares required for Commissioning; maintenance supervision & warranty period shall be maintained by the Contractor at his own cost.</p> <p>c) All necessary cables and connectors and other accessories required for installation (which require MPO cables for Leaf to spine connectivity in same floor).</p>
VII.	Tenderer should be an Original Equipment Manufacturer (OEM) or Authorized representative of OEM for this tender.
VIII.	Bidder has to quote for all SOR, and evaluation will be done on totality.
IX.	The Bidder(s)/OEM(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process
X.	The tenderer shall make available the offered products during technical evaluation for testing and benchmarking to RailTel at any testing facility approved by RailTel if required. Tenderer shall provide all the required equipment and accessories for above testing at testing facility. Tenderer shall bear all the cost of above testing. RailTel shall provide only rack space and power supply. Decision of RailTel shall be final and binding in this regard.
XI.	Against the tender multiple POs may be issued to meet the RailTel's Customer requirement. Tentative locations for supply and deployment of equipment will be Secunderabad /Visakhapatnam . In case of any change same will be communicated at the time of issue of final PO.
XII.	Only Class-I local suppliers (meeting minimum 50% local content) & Class-II local suppliers (meeting minimum 20% local content) are eligible to participate in this tender.

Chapter - 2-A

E-tendering Instructions to Bidders**1. INSTRUCTIONS FOR ONLINE BID SUBMISSION:**

- i. Following are the instruction for online bid submission as per the term and conditions:

The bidders are required to submit soft copies of their bids electronically on the e-tender Portal, using valid Class 3 Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the e-tender Portal, and submitting their bid online on the e-tendering portal as per uploaded bid. **Prepare their bids in accordance with the requirements and submitting their bids online on the e-tender Portal.**

More information useful for submitting online bids on the e-tender Portal may be obtained at: <https://railtel.enivida.com>.

2. REGISTRATION:

- i. Bidders are required to enroll on the e-Procurement Portal (URL: <https://railtel.enivida.com>) by clicking on the link "Online bidder Registration" on the e-tender Portal by paying requisite Registration fee as mentioned on the e-portal (Approx Rs.2360/-) Per vendor/per year.
- ii. As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- iii. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication with the bidder.
- iv. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (**Only Class III Certificates with signing + encryption key usage**) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.), with their profile.
- v. Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
- vi. Bidder then logs in to the site through the secured log-in by entering their user ID /password and the password of the DSC / e-Token.
- vii. The scanned copies of all original documents should be uploaded in pdf format on portal <https://railtel.enivida.com>.
- viii. After completion of registration payment, you need to send your acknowledgement copy on our help desk e-mail id ewizardhelpdesk@gmail.com for activation of your account

3. SEARCHING FOR TENDER DOCUMENTS

- i. There are various search options built in the RailTel Corporation of India Limited e-tender Portal, to facilitate bidders to search active tenders by several parameters.
- ii. Once the bidders have selected the tenders they are interested, they can pay the processing fee as mentioned on the e-portal (Including GST) (NOT REFUNDABLE) by net-banking / Debit / Credit card. After that respective contractor/Vendor may download the required documents / tender schedules, Bid documents etc. Once you pay both fee tenders will be moved to the respective 'requested' Tab. This would enable the e-tender Portal to intimate

the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.

4. PREPARATION OF BIDS

- i. Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- ii. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid.
- iii. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF formats. Bid Original documents may be scanned with 100 dpi with colored option which helps in reducing size of the scanned document.
- iv. To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Documents" available to them to upload such documents.
- v. These documents may be directly submitted from the "My Documents" area while submitting a bid and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

5. SUBMISSION OF BIDS

- i. Bidder should log into the website well in advance for the submission of the bid so that it gets uploaded well in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to any issues.
- ii. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document as a token of acceptance of the terms and conditions laid down by RailTel.
- iii. Bidder has to select the payment option as "Online Payment" to pay the tender fee / EMD as applicable and enter details of the instrument.
- iv. Bidder should submit the EMD online as per the instructions specified in the tender document. In case of non-submission of EMD amount (where applicable) online, the uploaded bid will be summarily rejected.
- v. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BOQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BOQ file, open it and complete the white Colored (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BOQ file is found to be modified by the bidder, the bid will be rejected.
- vi. The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- vii. All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by

unauthorized persons until the time of bid opening. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid opener public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.

- viii. The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- ix. Upon the successful and timely submission of bid click "Complete" (i.e. after Clicking "Submit" in the portal), the portal will give a successful Tender submission acknowledgement & a bid summary will be displayed with the unique id and date & time of submission of the bid with all other relevant details.
- x. The tender summary has to be printed and kept as an acknowledgement of the submission of the tender. This acknowledgement may be used as an entry pass for any bid opening meetings.

6. ASSISTANCE TO BIDDERS:

- 1. Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
- 2. Any queries relating to the process of online bid submission or queries relating to e-tender Portal in general may be directed to the 24x7 Helpdesk Support.

Please feel free to contact RailTel E-Nivida Helpdesk (as given below) for any query related to e-tendering.

- i. Helpdesk landline No: 011-49606060
- ii. Mr. Amrendra (9355030628)
- iii. Mr. Birendra Kumar (09205898228)

RailTel Contact-I (for general Information)

Sanjeeva Kumar: JGM/DC&TP

Telephone +91 99490 36346

E-mail ID: sanjeeva@railtelindia.com

RailTel Contact-II (for Technical clarification)

Krishna Verma: Sr. Mgr/DC

Telephone +91 90005 66603

E-mail ID: varma@railtelindia.com

RailTel Contact-I (for general Information and Bidding clarification)

Rama Mohan Rao : Sr.OA/DC

Telephone +91 9701114342

E-mail ID: armr@railtelindia.com

7. BID RELATED INFORMATION FOR THIS TENDER

The entire bid-submission would be online on RailTel E-Nivida Portal.

Broad outline of submissions are as follows:

- i. Submission of Bid Security/ Earnest Money Deposit (EMD)
- ii. Submission of digitally signed copy of Tender Documents/Addenda
- iii. Single Packet
- iv. Online response to Terms & Conditions of Tender.
- v. (Optional) Online Submission of modification, substitution bids for technical or financial parts, or withdrawal bid.

NOTE: Bidder must ensure that the bid must be successfully submitted online as per instructions of RailTel E-Nivida Portal.

8. ONLINE SUBMISSIONS:

The bidder is required to submit all the relevant documents online only with the following documents.

- a) EMD submission as per details mentioned in tender notice.
- b) Tender Cost submission as per details mentioned in tender notice.
- c) Power of attorney to be submitted online in accordance with Clause – 34, Chapter 6 Original copy is needed to be submitted by the successful bidder before issuance of LOA.
- d) In case bidder happens to be an MSE bidder, the documentary evidence for same shall be submitted on line.

9. SUBMISSION OF ELIGIBILITY CRITERIA RELATED DOCUMENTS:

Eligibility criteria related documents as applicable shall also be scanned and submitted "ONLINE"

NOTE: In case of internet related problem at a bidder's end, especially during 'critical events' such as a short period before bid-submission deadline, during online public tender opening event, it is the bidder's responsibility to have backup internet connections.

In case there is a problem at the e-procurement service provider's end (in the server, leased line, etc.) due to which all the bidders face a problem during critical events, and this is brought to the notice of RailTel by the bidders in time, then RailTel will promptly reschedule the affected event(s).

10. INSTRUCTIONS FOR TENDER DOCUMENT TO THE BIDDERS:

The RailTel Tenders are published on www.railtelindia.com and on RAILTEL E-NIVIDA Portal <https://railtel.enivida.com/>.

NOTE: For online bid submission the bidder will have to necessarily download an official online copy of the tender documents from RAILTEL E-NIVIDA portal, and this should be done well before the deadline for bid-submission.

11. SUBMISSION OF OFFERS AND FILLING OF TENDER:

This e-tender should be duly submitted online using the e-Procurement Portal <https://railtel.enivida.com/>. For detailed instructions please refer to RAILTEL E-NIVIDA Portal.

12. ATTENDANCE OF REPRESENTATIVES FOR TENDER OPENING:

Representatives of bidders desirous to attend the tender opening can do so on production of a proper letter of authority from the respective firm, failing which they may not be allowed to attend the tender opening. Authorized representatives of those firms who have submitted the tender documents alone shall be allowed to attend the tender opening.

(End of Chapter- 2A)

CHAPTER-3

A) Scope of Work & Technical Requirement

1. **Project Background-** RailTel Data Centre is currently providing many DC services like Cloud Hosting, VPN, Email, DR, DDoS, Backup, Security etc. to its customers, all these services are provided through Tier-III Data Centre's located at Secunderabad.

RailTel is planning to enhance the existing services in terms of capacity and features currently available.

2. **Scope of Work-**

The primary objective of this RFP is to select a bidder who shall supply, install, test and commission switches and integrate with current SDN software of RailTel. The key guidelines and scope should cover the following components:

- i. Supply, Installation, Configuration, Integration with existing Spine switches & SDN Controller (ACI), Acceptance Testing and Commissioning the supplied equipment with supporting licenses as per Schedule of Requirements.
- ii. Passive material required, cables, ties, cable manager, tagging/labelling etc. will be in the bidder scope and will be done as per data center standards. For cables CommScope/Belden/R&M or equivalent shall be considered.
- iii. All ports, Capacity, Power Supply asked is from Day-1, Bidder must provision the SFPs, Power Modules from day-1.
- iv. The bidder should ensure that all the peripherals, accessories, sub-components required for the functionality and completeness of the proposed solution as mentioned in the scope and specification in the RFP, including but not limited to the devices, equipment, hardware, accessories, software, licenses, tools, etc. shall also be provisioned according to the requirements of the proposed solution without any additional cost to RailTel.
- v. The bidder shall provide a warranty for a period of 5 (Five) /3 (Three) years from the date of acceptance as part of the scope of this tender as per SOR. Bidder should submit OEM undertaking to provide warranty/support for 5/3 years for supplied component by respective OEM and should have back-to-back warranty/support arrangement with respective OEM to ensure smooth operations during the contract period as per SOR.
- vi. Necessary arrangement and Coordination with OEM will be the responsibility of bidder.

3. **Technical Requirement**

- 3.1. **Technical Requirement - Leaf Switch:**

S N	Minimum Requirement / Specifications
	Solution Requirement
1	The Switch should support non-blocking Layer 2 switching and Layer 3 routing.
2	There switch should not have any single point of failure like power supplies and fans etc should have 1:1/N+1 level of redundancy.
3	Switch should support the complete STACK of IPv4 and IPv6 services.
4	The Switch and different modules used should function in line rate and should not have any port with oversubscription ratio applied.
5	The Switch should support third-party Multi-Source Agreement (MSA) standards compliant optical transceiver.
	Minimum Hardware and Interface Requirement
6	Switch should have the following interfaces:

S N	Minimum Requirement / Specifications
a.	48 x 1G/10G Multi Mode Fiber Interfaces populated with 48 Nos 10G SFP+ multi-mode transceivers. Transceiver from Switch OEM or third-party Multi-Source Agreement (MSA) standards compliant optical transceiver supported and tested in offered switch model.
c.	6 x 40G /100G ports populated using multimode 6 Nos 100G SR Transceivers for uplink connectivity. Transceiver from Switch OEM or third-party Multi-Source Agreement (MSA) standards compliant optical transceiver supported and tested in offered switch model.
7	Switch should have console port.
8	Switch should have management interface for Out of Band Management.
9	Switch should be 1RU rack mountable and support side rails if required.
10	Switch should have adequate power supply for the complete system usage with all slots populated and used and provide N+1 redundant.
11	Switch should have hardware health monitoring capabilities and should provide different parameters through SNMP.
12	Switch should have a minimum 32MB buffer or more.
13	Switch should have smart buffering mechanism to classify long lived versus short lived flows and must have capability to dynamically prioritize short lived flows during congestion to avoid packet drop of mission critical traffic.
14	Switch should support VLAN tagging (IEEE 802.1q)
15	Switch should support IEEE Link Aggregation and Ethernet Bonding functionality to group multiple ports for redundancy.
16	Switch should support Configuration roll-back and check point.
17	Switch should support for different logical interface types like loopback, VLAN, SVI/RVI, Port Channel, multi chassis port channel/LAG etc.
Performance Requirement	
18	Switch should support Graceful Restart for OSPF, BGP etc.
19	Switch/Solution should support minimum 512 VRF, however bidder has to ensure that each switch should support minimum 128 VRF from day-1.
20	The switch should support uninterrupted forwarding operation for OSPF, BGP etc. routing protocol to ensure high-availability during primary controller failure.
21	The switch should support hardware-based load balancing at wire speed using LACP and multi chassis EtherChannel/LAG.
22	Switch should support minimum 2.1 Tbps of switching capacity.
a.	Switching
b.	IP Routing (Static/Dynamic)
c.	IP Forwarding
d.	Policy Based Routing
e.	QoS
f.	ACL and Other IP Services
g.	IPv6 host and IPv6 routing
Advanced Features	
23	Switch should support Network Virtualization using Virtual Over Lay Network using VXLAN / NVGRE.
24	Switch should support VXLAN and EVPN or equivalent for supporting Spine - Leaf architecture to optimize the east - west traffic flow inside the data center.
25	Switch should support OpenFlow/Open Day light/Open Stack controller.
26	Switch should support VXLAN routing (single pass without any re-circulation).
Switch should integrate and would be part of Existing ACI Fabric (as a Leaf), so that the Data Center Existing Networking environment can be used seamlessly with following Benefits:	
policy-driven automation through an integrated underlay and overlay, is hypervisor agnostic, and extends policy automation to any workload — including virtual machines, physical bare-metal servers, and containers.	

S N	Minimum Requirement / Specifications
	The proposed solution must be able to analyse real time data about the network which includes any metadata, configurations, policies, device states or protocol states and then run automated checks to identify potential errors, misconfigurations and network misbehaviours.
	The proposed solution must be able to verify configurations before been committed to be adherent to configuration best practices and if any check/verification failure occurs then system must notify it to the admin via a suitable mechanism
	Layer2 Features
28	Spanning Tree Protocol (IEEE 801.D, 802.1W, 802.1S).
29	Switch should support VLAN Trunking (802.1q) and should support 3900 VLAN.
30	Switch should support basic Multicast IGMP v1 / v2, v3.
31	Switch should support minimum 64K no. of MAC addresses.
32	Switch should support 8 Nos. of link or more per Port channel (using LACP) and support 48 port channels or more per switch.
33	Switch should support Industry Standard Port/Link Aggregation for All Ports across any module or any port.
34	Switch should support multi chassis Link Aggregation for All Ports across any module or any port of the switch and Link aggregation should support 802.3ad LACP protocol for communication with downlink/uplink any third party switch or server.
35	Switch should support Jumbo Frames up to 9K Bytes on all available Ports.
36	Support for broadcast, multicast and unknown unicast storm control to prevent degradation of switch performance from storm due to network attacks and vulnerabilities.
37	Switch should support Link Layer Discovery Protocol as per IEEE 802.1AB for finding media level failures.
	Layer3 Features
38	Switch should support all physical ports to use either in Layer2 or Layer 3 mode and also should support layer 3 VLAN Interface and Loopback port Interface.
39	Switch should support basic routing feature i.e. IP Classless, default routing and Inter VLAN routing.
40	Switch should support VRF route leaking functionality from day 1.
41	Switch should provide multicast traffic reachable using:
a.	PIM-SM
b.	PIM-SSM
c.	Switch should support basic Multicast IGMP v1 / v2, v3.
	Availability
42	Switch should have provisioning for connecting to 1:1/N+1 power supply for usage and redundancy.
43	Switch should provide gateway level of redundancy in IPv4 and IPv6 using HSRP or VRRP.
44	Switch should support for BFD For Fast Failure Detection as per RFC 5880 or latest.
	Quality of Service
45	Switch system should support 802.1P classification and marking of packet using:
a.	CoS (Class of Service)
b.	DSCP (Differentiated Services Code Point)
c.	Source physical interfaces
d.	Source/destination IP subnet
e.	Protocol types (IP/TCP/UDP)
f.	Source/destination TCP/UDP ports
46	Switch should support methods for identifying different types of traffic for better management and resilience
47	Switch should support for different type of QoS features for real time traffic differential treatment using
a.	Weighted Random Early Detection
b.	Strict Priority Queuing

S N	Minimum Requirement / Specifications
48	Switch should support to trust the QoS marking/priority settings of the end points as per the defined policy
49	Switch should support Flow control of Ethernet ports to control traffic rates during congestion by allowing congested nodes to pause link operation at the other end for receiving traffic
	Security
50	Switch should support for deploying different security for each logical and physical interface using Port Based access control lists of Layer-2 to Layer-4 in IPv4 and IPv6 and logging for fault finding and audit trail
51	Switch should support control plane i.e. processor and memory protection from unnecessary or DoS traffic by control plane protection policy
52	Switch should support for stringent security policies based on time of day of Layer-2 to Layer-4
53	Switch should support for external database for AAA using:
a.	TACACS+
b.	RADIUS
54	Switch should support DHCP Snooping
55	Switch should support Dynamic ARP Inspection to ensure host integrity by preventing malicious users from exploiting the insecure nature of the ARP protocol
56	Switch should support to prevent edge devices in the network not administrator's controlled from becoming Spanning Tree Protocol root nodes
57	Switch should support unicast and/or multicast blocking on a switch port to suppress the flooding of frames destined for an unknown unicast or multicast MAC address out of that port.
58	Switch should support unicast and/or multicast blocking on a switch port to suppress the flooding of frames destined for an unknown unicast or multicast MAC address out of that port.
	Manageability
59	Switch should support for sending logs to multiple centralized syslog server for monitoring and audit trail.
60	Switch should provide remote login for administration using:
a.	SSH v2
61	Switch should support for capturing packets for identifying application performance using local and remote port mirroring for packet captures.
62	Switch should support for management and monitoring status using different type of Industry standard NMS using:
a.	SNMP v1 and v2
b.	SNMP v3 with encryption
c.	Filtration of SNMP using Access list
d.	SNMP MIB support for QoS
63	Switch should support for basic administrative tools like:
a.	Ping
b.	Traceroute
64	Switch should support central time server synchronization using Network Time Protocol NTPv4.
65	Switch should support for providing granular MIB support for different statistics of the physical and logical interfaces.
66	Switch should support for predefined and customized execution of script for device manage for automatic and scheduled system status update for monitoring and management.
67	Switch should provide different privilege for login into the system for monitoring and management.
68	Switch should support Real time Packet Capture using Wireshark in real time for traffic analysis and fault finding.
	IPv6 features
69	Switch should support for IPv6 connectivity and routing required for network reachability using different routing protocols such
a.	OSPF v3

S N	Minimum Requirement / Specifications
b.	BGP with IPv6
c.	IPv6 Policy based routing
d.	IPv6 Dual Stack etc
e.	IPv6 Static Route
f.	IPv6 Default route
g.	Should support route redistribution between these protocols
70	Switch should support multicast routing in IPv6 network using PIMv2 Sparse Mode
71	Switch should support for QoS in IPv6 network connectivity
72	Switch should support for monitoring and management using different versions of SNMP in IPv6 environment such as:
a.	SNMPv1, SNMPv2c, SNMPv3
b.	SNMP over IPv6 with encryption support for SNMP Version 3
73	Switch should support syslog for sending system log messages to centralized log server in IPv6 environment.
74	Switch should support NTP to provide an accurate and consistent timestamp over IPv6 to synchronize log collection and events
75	Switch should support for IPv6 different types of tools for administration and management such as:
a.	Ping
b.	Traceroute
c.	SSH
76	All relevant licenses for all the above features and scale should be quoted along with switch.
77	Comprehensive onsite hardware warranty for 3 years with Next business Day (NBD) support.
78	Online upgrade the version of firmware/software/patches as and when required.

3.2. Technical Requirement – TOR Switch:

S N	Minimum Requirement / Specifications
	Solution Requirement
1	The Switch should support non-blocking Layer 2 switching and Layer 3 routing.
2	The switch should not have any single point of failure like power supplies and fans etc should have 1:1/N+1 level of redundancy.
3	Switch should support the complete STACK of IPv4 and IPv6 services.
4	The Switch and different modules used should function in line rate and should not have any port with oversubscription ratio applied.
5	The Switch should support third-party Multi-Source Agreement (MSA) standards compliant optical transceiver.
	Hardware and Interface Requirement
6	Switch should have the following interfaces:
a.	Minimum of 24 x 1/10-Gbps Interfaces populated with 24 Nos 10G Multi mode SFP+ transceivers. Transceiver from Switch OEM or third-party Multi-Source Agreement (MSA) standards compliant optical transceiver supported and tested in offered switch model.
b.	Minimum of 2 x100G ports populated with 2 Nos multimode 100G SR Transceivers for uplink connectivity. Transceiver from Switch OEM or third-party Multi-Source Agreement (MSA) standards compliant optical transceiver supported and tested in offered switch model.
c.	2 Nos of 100G SR transceivers should be additional supplied with switch for uplink connectivity termination.
7	Switch should have console port.
8	Switch should have management interface for Out of Band Management.
9	Switch should be rack mountable and support side rails if required.
10	Switch should have adequate power supply for the complete system usage with all slots populated and used and provide N+1 redundant.
11	Switch should have hardware health monitoring capabilities and should provide different parameters through SNMP.
12	Switch should have a minimum 32MB buffer of more.
13	Switch should support VLAN tagging (IEEE 802.1q)
14	Switch should support IEEE Link Aggregation and Ethernet Bonding functionality to group multiple ports for redundancy.
15	Switch should support Configuration roll-back and check point.
16	Switch should support for different logical interface types like loopback, VLAN, SVI/RVI, Port Channel, multi chassis port channel/LAG etc.
	Performance Requirement
17	Switch should support Graceful Restart for OSPF, BGP etc.
20	The switch should support uninterrupted forwarding operation for OSPF, BGP etc. routing protocol to ensure high-availability during primary controller failure.
21	The switch should support hardware based load balancing at wire speed using LACP and multi chassis etherchannel/LAG.
22	Switch should support minimum 880Gbps of switching capacity.
a.	Switching
b.	IP Routing (Static/Dynamic)
c.	IP Forwarding
d.	Policy Based Routing
e.	QoS
f.	ACL and Other IP Services
g.	IPv6 host and IPv6 routing
	Layer2 Features
23	Spanning Tree Protocol (IEEE 801.D, 802.1W, 802.1S).
24	Switch should support VLAN Trunking (802.1q) and should support 3900 VLAN.

S N	Minimum Requirement / Specifications
25	Switch should support basic Multicast IGMP v1 / v2, v3.
26	Switch should support minimum 64K no. of MAC addresses.
27	Switch should support 8 Nos. of link or more per Port channel (using LACP) and support 24 port channels or more per switch.
28	Switch should support Industry Standard Port/Link Aggregation for All Ports across any module or any port.
29	Switch should support multi chassis Link Aggregation for All Ports across any module or any port of the switch and Link aggregation should support 802.3ad LACP protocol for communication with downlink/uplink any third party switch or server.
30	Switch should support Jumbo Frames up to 9K Bytes on all available Ports.
31	Support for broadcast, multicast and unknown unicast storm control to prevent degradation of switch performance from storm due to network attacks and vulnerabilities.
32	Switch should support Link Layer Discovery Protocol as per IEEE 802.1AB for finding media level failures.
	Layer3 Features
33	Switch should support all physical ports to use either in Layer2 or Layer 3 mode and also should support layer 3 VLAN Interface and Loopback port Interface.
34	Switch should support basic routing feature i.e. IP Classless, default routing and Inter VLAN routing.
	Availability
35	Switch should have provisioning for connecting to 1:1/N+1 power supply for usage and redundancy.
36	Switch should provide gateway level of redundancy in IPv4 and IPv6 using HSRP/VRRP.
	Security
37	Switch should support for deploying different security for each logical and physical interface using Port Based access control lists of Layer-2 to Layer-4 in IPv4 and IPv6 and logging for fault finding and audit trail
38	Switch should support control plane i.e. processor and memory protection from unnecessary or DoS traffic by control plane protection policy
39	Switch should support for stringent security policies based on time of day of Layer-2 to Layer-4
40	Switch should support for external database for AAA using:
a.	TACACS+
b.	RADIUS
41	Switch should support DHCP Snooping
42	Switch should support Dynamic ARP Inspection to ensure host integrity by preventing malicious users from exploiting the insecure nature of the ARP protocol
42	Switch should support to prevent edge devices in the network not administrator's controlled from becoming Spanning Tree Protocol root nodes
43	Switch should support unicast and/or multicast blocking on a switch port to suppress the flooding of frames destined for an unknown unicast or multicast MAC address out of that port.
44	Switch should support unicast and/or multicast blocking on a switch port to suppress the flooding of frames destined for an unknown unicast or multicast MAC address out of that port.
	Manageability
45	Switch should support for sending logs to multiple centralized syslog server for monitoring and audit trail.
46	Switch should provide remote login for administration using:
a.	SSH v2
47	Switch should support for capturing packets for identifying application performance using local and remote port mirroring for packet captures.
48	Switch should support for management and monitoring status using different type of Industry standard NMS using:
a.	SNMP v1 and v2

S N	Minimum Requirement / Specifications
b.	SNMP v3 with encryption
c.	Filtration of SNMP using Access list
d.	SNMP MIB support for QoS
49	Switch should support for basic administrative tools like:
a.	Ping
b.	Traceroute
50	Switch should support central time server synchronization using Network Time Protocol NTPv4.
51	Switch should support for providing granular MIB support for different statistics of the physical and logical interfaces.
52	Switch should support for predefined and customized execution of script for device manage for automatic and scheduled system status update for monitoring and management.
53	Switch should provide different privilege for login into the system for monitoring and management.
54	Switch should support Real time Packet Capture using Wireshark in real time for traffic analysis and fault finding.
	IPv6 features
55	Switch should support for IPv6 connectivity and routing required for network reachability using different routing protocols such
a.	OSPF v3
b.	BGP with IPv6
c.	IPv6 Policy based routing
d.	IPv6 Dual Stack etc
e.	IPv6 Static Route
f.	IPv6 Default route
g.	Should support route redistribution between these protocols
56	Switch should support for monitoring and management using different versions of SNMP in IPv6 environment such as:
a.	SNMPv1, SNMPv2c, SNMPv3
b.	SNMP over IPv6 with encryption support for SNMP Version 3
57	Switch should support syslog for sending system log messages to centralized log server in IPv6 environment.
58	Switch should support NTP to provide an accurate and consistent timestamp over IPv6 to synchronize log collection and events
59	Switch should support for IPv6 different types of tools for administration and management such as:
a.	Ping
b.	Traceroute
c.	SSH
60	All relevant licenses for all the above features and scale should be quoted along with switch.
62	Comprehensive onsite hardware warranty for 3 years with Next business Day (NBD) support.
63	Online upgrade the version of firmware/software/patches as and when required.

3.3. Technical Requirement – Smart Rack Solution:

The detailed Specification for Supply, Installation, Testing and Commissioning of Smart Rack/ Edge Data Centre with 03 IT Racks along with all other support infrastructure like UPS, HVAC, environmental control, Access Control System, FAS, Fire Suppression System and other accessories at Railtel Site (**AMTZ Campus, Pragati Maidan, VM Steel Project S.O, Visakhapatnam, Andhra Pradesh, PIN-530031**).

Offered Smart Rack / Data Centre Make & Model:

SN	Smart Rack/ Edge Data Centre (03 IT Racks) Specification	Bidder Compliance (Yes/No)
1	<p>Integrated Rack DC Infrastructure with inbuilt hot and cold aisle containment of 3 racks should cater IT load up to 20 kW. Both Hot & Cold aisle containment should be part of the rack frame. Integrated Rack DC Infrastructure essentially should include internal redundant or backup power supplies, environmental controls (Precision air conditioning, fire suppression, smoke detection, Water leak detection and humidity sensors), and security devices. Critical systems like UPS & HVAC should have N+N redundant topology. Environmental monitoring shall be done from IP based software.</p>	
1.1	Operating temperature 0°C to +60°C	
1.2	Relative humidity ≤95%RH, no condensation	
1.3	Use environment: The dust meets the indoor standard of the GR-63 without corrosive gases, flammable gases, oil mist, water vapour, dripping or salt, etc.	
1.4	Protection level IP20	
2	<p>Precision Air Conditioner-In-Row closed loop Air-Conditioning-Data center server and network racks should be equipped with In-row Variable capacity cooling units to provide closed loop precision cooling system which should be able to cool the equipment’s uniformly right from 1st U to 42nd U of Rack. Precision Air Cooling units should be in multiples of >20kW sensible cooling capacity considering 45°C ambient temperature to cater the IT load of 20 kW in N+N topology.</p>	
2.1	Cooling System should be DX (Variable capacity) type in N+N Topology.	
2.2	The unit incorporates a high efficiency DC brushless compressor with a crankcase heater, filter dryer, moisture indicating sight glass, and an electronic expansion valve.	
2.3	The compressor is equipped with an environment-friendly refrigerant (R410A), and a DC brushless type arrangement with variable capacity operation of 30% to 100%.	
2.4	Each unit should be capable of handling up to 5400 CMH with a horizontal airflow pattern and is rated at 5000 CMH.	
2.5	Inbuilt Heater(≥3kW) and Humidifier in each unit	
2.6	Micro Processor should have capacity to store up to 1000 historical event record.	
2.7	The controller allows setting and/or monitoring of the following space parameters:	
	Air inlet temperature	
	Air supply temperature	
	Return temperature set point	
	Supply temperature set point	
	Humidity (inlet)	
	Humidity set point	

	Suction pressure	
	Discharge pressure	
	Compressor output	
	Fan output	
	Heating status	
	Humidifier status	
	Supply voltage	
	The example of available warnings/alarms:	
	High supply temperature	
	Low supply temperature	
	High return humidity	
	Low return humidity	
	Loss of airflow	
	Compressor low pressure	
	Compressor high pressure	
	Electrical heater high temperature (when applicable)	
	Clogged filter	
	Supply sensor failure	
	Humidifier problem	
	Rack sensor failure	
3	UPS System- 20 kVA, 3-Ø input and 1-Ø output, N+N Redundancy, with unity output power factor Online mode efficiency up to 90% and inbuilt Isolation Transformer with 30 minutes combined backup (15 minutes each ups at full load)	
3.1	Inbuilt Isolation transformer	
3.2	True On-line UPS with Widest input range (195VAC -480VAC)	
3.3	IGBT based Double conversion PWM based online UPS.	
3.4	Facility for remote monitoring	
3.5	N+N redundancy should be provided.	
3.6	UPS and batteries should be installed outside of the smart rack as per the site requirement.	
3.7	Battery Racks has to be provided by bidder.	
3.8	Battery type-SMF, VRLA, LI-ION	
4	Rack IPDU- Each IT Rack has 02 nos of Vertical Rack PDU with Unit Level monitoring, 32A, 230V, 7.3kW, Vertical, IEC C13, IEC C19, 3m power cord with 2P+E (IP44), Black Powder Coat.	
4.1	Input power monitoring with breaker level current monitoring. Monitoring through IP based Ethernet connectivity. Local high visibility LED display	
4.2	Phase (A) Monitoring (kWh, W, VA, PF, V, A)	
4.3	Protocols Supported: DHCP, HTTP, HTTPS, IPv4, IPv6, LDAP, NTP, RADIUS, RSTP, SSH, SMTP, SNMP (v1/v2c/v3), Syslog, TACACS+	
5	Electrical Distribution- Main Electrical Panel and Cabling-02 nos. DB panel shall be provided for redundancy with diversified path. Essential MCB/MCCB should be provided with electrical system. DB panel mounted on Utility rack shall be covered with FK-5-1-12 / MX-204 / NOVEC 1230 Gas based fire suppression system. Every IT Rack need to be powered with dual source.	
5.1	Suitable earth pits (2 Nos) and earthing system (IS3043) to considered with copper strip from earth pits to Datacenter system. Distance upto 30 meters needs to be considered in the proposal.	

5.2	Datacenter System should be design and comply with TIA 942/IEEE/ISO/ASHRAE Standards.	
6	Fire Detection and Suppression -Fire detection and suppression system: Fire detection and suppression system should be mounted in panel adjacent to Smart Racks to avoid consumption of any usable U space an In-rack built-in feature of solution. It should have Fire alarm and fire suppression unit and the fire suppression agent should be FK-5-1-12 / MX-204 / NOVEC 1230 Gas as per NFPA 2001 guidelines	
6.1	FK-5-1-12 / MX-204 / NOVEC 1230 Clean Agent for fire suppression system	
6.2	Fire detection and alarm systems, with detectors and panel	
6.3	Protected area: The entire enclosed volume of the Data Centre containment including electrical panel mounted in utility cabinet should be protected with fire detection and fire suppression system.	
6.4	The FK-5-1-12 / MX-204 / NOVEC 1230 system is designed and installed as per NFPA 2001-2012 Edition. SMPV, Petroleum and Safety Explosives Organization (PESO) approved cylinder filled with FK-5-1-12 / MX-204 / NOVEC 1230 is installed in specially designed Modular rack.	
7	Environmental Controls - Each set of IT rack should include basic environmental controls:	
7.1	Fire Alarm System	
7.2	Water Leak Detection system	
7.3	Temperature and Humidity Sensors for measuring Temperature at 3 levels i.e. Top, Middle and Bottom, at both front & rear of the each IT rack, while the Middle Temperature also should have Humidity measurement sensor.	
7.4	Door Sensor	
7.5	Alarm beacon	
7.6	Rodent Control System	
8	IT Racks - 03 no. 42 U, 600 mm x 1000 mm, with integrated hot & cold aisle containment of minimum 200 each. Both Hot & Cold aisle containment should be part of the rack frame.	
8.1	The integrated infrastructure would provide much functionality and some of the key functionalities are – Both Cold aisle & hot aisle containment, of minimum 200 mm each, should be integrated part of the rack frame, for airflow, Airtight Thermally insulated cabinet, remote Management	
8.2	All Server racks will get power feed from two independent 20 kVA UPS systems to ensure redundancy.	
9	Monitoring -Detailed Monitoring & Diagnostics thru Rack Data Unit, 1U rack mountable, with redundant power supplies & capable of single window monitoring of all the environmental parameters along with UPS & air conditioning through a single window dashboard over Ethernet & Capable for sending Email Alerts	
9.1	Monitoring unit should integrate & monitor environmental parameters like temperature, humidity, door access, smoke etc. with UPS & cooling unit in a single dashboard along with other environmental parameters like temperature, humidity, smoke etc.	
9.2	The monitoring unit should support basic protocols like Telnet/SSH/FTP, SFTP/HTT/ HTTPS/ NTP/ DHCP/ DNS Server/ smtp/ TCP/IP4. It should support network interface of 10/100M self-adaptable Ethernet ports.	
9.3	UPS & air conditioning should be integrated with the monitoring unit to monitor all critical parameters (Cooling unit: Unit status, supply & return air temperature, humidity; UPS: Input – Output Voltage, current, pf, battery remaining time, battery charging status) of both the systems in a single dashboard.	

9.4	Electrical DB panel with Energy Meter compatible to HMI for Power Usage Monitoring.	
9.5	Status based LED Lights within Racks	
9.6	Touch screen HMI – Graphical User Interface display should be mounted on the Integrated rack solution for local monitoring.	
10	Access Control System -Rack based Biometric access control system provided should be controlled by common access control panel with control for both front as well as rear doors. IP based Access control with user exclusive authentication.	
10.1	Configurable system for user defined access	
10.2	Built-in Real Time Clock (RTC), calendar; complete Database stored locally and shall be capable of operating offline on standalone mode.	
10.3	Record, report and archive each and every activity (permission granted and / or rejected) with log formats.	
10.4	Fail safe operation in case of no-power condition and abnormal condition such as fire, theft, intrusion, loss of access control, etc	
10.5	At the biometric reader, user presents the finger to the biometric reader which is unique to each employee. The pattern is read and compared with stored data to grant / deny access.	
11	Misc -Rack frame is, scalable and modular with safe load carrying capacity of 1000 Kg	
11.1	Color shade of Rack is RAL 7021	
11.2	Base plinth with 100 mm height	
11.3	Cable entry provision from top & bottom both side of rack	
11.4	Cut outs with rubber/brush grommet on top and bottom cover of rack for cable entry	
11.5	Vertical Cable manager on both LHS & RHS on rear side	
11.6	Each rack shall have front glass door for complete 42U height visibility & rear steel split door integrated with common Biometric access control panel.	
11.7	Thermally insulated cold aisle chamber	
11.8	Blanking Panel: 50%	

3.4 Technical Requirement – Unified NAS Storage 64 TB usable :

S/N	Specification Category	Specification Details	Required Value
1	Physical Identification	No. of Controllers	2
		Form Factor	Rack
		Hardware Form Factor of Storage System (RU)	2
2	Type	Storage System Type	Unified Storage
3	Capacity	Storage Capacity (TB)	64
4	Disk	Disk Type	NL-SAS
		Speed of dual ported disk drive in Gbps	12
		Total Numbers of Drive Slots	140
		Number of Drive Slots Populated with drives of different type in the Storage System	12
		Total no of drive slot populated with NL-SAS	12
		Drive Type Wise Storage Capacity of System in GB	10000
		Provision for additional Capacity	Yes
If Yes, Number of Drive Slots available to achieve additional capacity	Add shelf & drives		

5	Connectivity / Port	Type of Front end Ports	16G FC*4, 10G SFP+*4
		Number of Front end Ports	16G FC*4, 10G SFP+*4
		Speed of front end Ports in Gbps	16
		Type of Back end Ports	SAS
		Number of Back end Ports	4
		Speed of Back end ports in Gbps	12
6	Controllers	Number of Controllers/VSD/ Node available in the storage System on common back plane without using external switch/device OR without common backplane using switches	2
		RAID Level Support	6
		Active-Active Controllers Configured in HA	Yes
7	System Cache	Total Configurable Cache (GB)	64
8	Stripping	Wide Stripping or equivalent feature	Yes
9	Snapshot	No of Snapshot Copies Per Volume	255
		License for Snapshot included	Yes
10	Data Replication	Remote Replication	Yes
		Synchronized Replication Support	Yes
		Asynchronous Replication Support	Yes
11	De-duplication & Compression	Type of Data Compression	S/W Level
		Type of Data Deduplication	S/W Level
		No Single point of Failure with Non-Disruptive replacement of Hardware	Yes
		The Storage provide Non disruptive Firmware /Microcode upgrade	Yes
12	Encryption Mode	Encryption Required	Yes
		Type of Data at Rest Encryption	SW Based
13	Management	Storage management software for configuration and multi-pathing (part of the supply)	YES
14	Multi-Pathing	Multi-pathing and load balancing and fail over software (part of supply) with license for Windows/Linux servers or shall support native multipathing of OS.	YES
15	Protocol Support	Protocols Supported by the storage system from day one	FC, ISCSI, NFS, CIFS
16	OS Support	Operating System Platform and Clustering Supported by the Storage from day one	Windows, Linux, Unix
17	Environmental Parameters	Operating Temperature Range	5 to 40
		Storage Temperature Range	5 to 40
		Operating Humidity (Rh)	8 to 90
		Storage Humidity (Rh)	8 to 90
18	Compliance	Storage System is compliant with IPv6	Yes
19	Power	Standby power consumption of System in Watt	750
20	Scope of Supply / Work	Scope of Supply	It includes installation, commissioning & integration together with all necessary software to make the system fully functional as intended.
21	Warranty	On Site OEM Warranty	3 Years

22	Training	OEM Training	Installation configuration and Management training to be provided by the OEM of supplied product.
23	Solution should have capabilities to add NAS/Gateway/File serving node in active-active architecture for CIFS and NFS connections		
24	The NAS/Gateway/File serving node should be purpose-built appliance and should not be a host based or running on general purpose OS or a simple SMB/NFS configured file server.		
25	Proposed NAS system should have purpose built hardware acceleration through specialized hardware such as FPGA for superior performance		
26	Proposed NAS system should have the capability to tier data to an Object Storage or Cloud natively		
27	Any hardware/VM required to implement the supplied solution shall be provided by bidder.		
28	Installation configuration and Management training to be provided by the OEM of supplied product.		
29	Solution should have capability for ensuring the integrity of files/data/volume from Day-1.		

3.5 Technical Requirement – Backup Solution:

S/N	Minimum Requirement / Specifications	Compliance (Yes/No)
1	The Backup, Replication & Monitoring Solution should support industry-leading Operating System platforms including: Windows 2016 / 2019 / 2022, VMware and Linux. Also, should support VM level, Volume level, Disk level, and File level backup with VMware, Redhat, Oracle cloud environments (with both Agent-less and Agent-based).	
2	The Backup, Replication & Monitoring Solution should be from a single OEM and should be rated as a 'Leader' and top 5 in Enterprise Backup and Recovery Software by leading industry analysts like IDC OR Forrester Wave OR GARTNER.	
3	Offered Backup Solution Shall support all above operating systems and Databases in Clustering.	
4	Backup Solution system shall support Enterprise SAS spinning drives, SSD and near line SAS / 7.2K RPM drives.	
5	Backup Solution shall provide all the features mentioned below:	
5.a	Hybrid Cloud Backup & Recovery Malware Detection Syslog Event Forwarding I/O Anomaly Visualizer "Four-Eyes" Authorization Backup of Object Storage AI-Powered Assistance Next-Generation Instant Recovery Engine Public Cloud: AWS, Microsoft Azure & Google Cloud (IaaS & PaaS) Virtual: VMware ESXi, Microsoft Hyper-V, Nutanix AHV & RedHat Virtualization, Oracle KVM Physical: Windows, Linux, macOS & Unix Key Management Server Integration Role-Based Access Control (RBAC) PowerShell module RESTful API Performance monitoring and alerting for backup activity	
5.b	Immutability Multi-factor authentication (MFA) Deployment in Kerberos-only environments Security & Compliance Analyzer Deployment in IPv6 environments FIPS compliance Audit capabilities Application-aware, image-based backups NAS Backup Backup of Object Storage Cloud-Integrated Agents Agents for Microsoft Windows, Linux, macOS, AIX and Solaris Backup Copy jobs	

5.c	<p>End-to-end encryption Primary Snapshot Orchestration ROBO Guest Interaction Proxy Proxy affinity Storage latency control Built-in WAN Acceleration Backup from Storage Snapshots Plug-ins for SAP HANA on IBM Power, IBM Db2 (Intel Linux + IBM AIX), Oracle RMAN, SAP HANA and SAP on Oracle, Microsoft SQL</p>	
5.d	<p>Linux Hardened Repository Per-VM backup files Native tape support File versions archiving De-duplicating storage appliance integration</p>	
5.e	<p>CDP (Continuous Data Protection) File and Application-Level Restore from CDP replica Planned Failover with CDP replicas Image-based VM replication Assisted failover and failback Replication from a backup Planned failover One-Click failover orchestration</p>	
5.f	<p>Entire VM restore VM disks and files restore Direct Restore to AWS, Azure, and Google Cloud Instant Recovery of VM, disk, database, file share File-Level Recovery Permissions Recovery</p>	
5.g	<p>Secure Restore Staged Restore SureBackup SureReplica</p>	
6	<p>Offered Backup Solution subsystem shall support Backup Solution based replication to DR location. License for maximum supported capacity of the array shall be offered.</p>	
7	<p>Offered Backup Solution subsystem shall support replication to multiple Backup Solution of the same family in fan-out mode.</p>	
8	<p>Offered Backup Solution shall have inbuilt performance management software. Configuration Dashboard shall show overall IOPS and MB/sec performance.</p>	
9	<p>Offered Backup Solution shall have plug-in for VMware VCenter, Microsoft System center as well as vBackup Solution APIs (VAAI) for array integration.</p>	
10	<p>The proposed Backup software must offer host based / CPU based licensing with no restrictions on type of arrays (protecting heterogenous storage technologies), front end production capacity or backend backup target capacity for virtual or physical servers. Licenses and associated hardware should be supplied for primary and DR site.</p>	
11	<p>Backup Solution should be an image level backup software supporting popular hypervisors like VMware and Hyper-V Virtual Environments. Provide Block level Incremental and Differential Backup and support Incremental and Differential Imaging.</p>	
12	<p>Recovery verification should automatically boot the server from backup and verify the recoverability of VM image, Guest OS and Application Consistency. Backup software should provide Backup and Replication capabilities in one console only.</p>	
13	<p>Product / Solution offered by Bidder shall contain following Monitoring & Analytics capabilities: 1) Threat Center Dashboard 2) YARA Content Analysis 3) ServiceNow Integration 4) Real-Time Monitoring, Analytics & Alarms 5) Comprehensive Reporting & Dashboards 6) Intelligent Diagnostics & Remediation Actions 7) Capacity Planning & Chargeback</p>	
14	<p>Bidder shall provide all software licenses (Operating System, Application, Database, etc) required for complete implementation of Backup + Storage Solution.</p>	

3.6 Technical Requirement – OS Windows 2022 / Latest Server Edition:

S. No.	Description of Requirement	Compliance (Yes/No)
1	Type of license must be perpetual in nature.	
2	Offered product must be compatible to run on Virtual Servers hosted in RailTel Private Cloud Platform.	
3	Option must be available for download and support of N-2 versions of offered product.	
4	Both 32 & 64 Bits versions of the offered product must be available for download and install.	
5	Offered product should have support from OEM for unlimited updates, patches and bug fixes within the support period.	
6	Following Features of Operating System Software must be available in the offered product: Real-time Operating System, High availability extension, Resilient Storage, Support for Containerization, Support Native APIs, Inbuilt Antivirus, Capability to support Integrated Firewall, etc.	

3.7 Table for Local Content :

SOR	ITEM DESCRIPTION	UOM	QTY	Percentage (%) of local content	Average of Local Content
1	Supply, Installation and commissioning of ToR Switch with minimum 24 port 10Gbps	Nos	02		
1A	Supply, Installation and commissioning of SFP's 10 G (for sl no.1)	Nos	48		
1B	Supply, Installation and commissioning of SFP's 100 G (for sl no.1)	Nos	8		
2	Leaf Switches with minimum 48 Port 10 Gbps with 3-year support Including Installation and Commissioning (I&C) Make & Model : CISCO N9K-C93180YC-FX	Nos	12		
2A	Supply, Installation and commissioning of SFP's 10 G (for sl no.2)	Nos	576		
2B	Supply, Installation and commissioning of SFP's 100 G (for sl no.2)	Nos	72		
3	Supply, Installation and commissioning of Smart Rack (19", 42U) with Fire Suppression, UPS, Accessories, CVR (Air Condition), RDU (Central Monitoring) with 5 nos of IT Racks	No	1		
4	Supply, Installation and commissioning of Unified NAS Storage 64 TB usable	No	8		
5	Supply, Installation and commissioning of Backup Solution with 5 YR support	No	8		
6	Supply, Installation and commissioning of Backup Solution with 3 YR support	No	2		
7	Supply and Installation OS Data center edition 2 core - Windows server 2022/Latest	No	72		

Note: Item wise local content as per OEM for the make and model quoted & average % of local content for the all proposed supplies to be mentioned in above table and mandatory.

CHAPTER-3

B) INSPECTION AND INSTALLATION, TESTING & COMMISSIONING

1. TESTS AND MEASUREMENTS

All equipment's shall be subjected to tests as per technical specification and requirement specified in Chapter-3, Part-A, at manufacturer facility/premises and a test report for each equipment duly signed by the testing authority and accepted by suitable authority shall be submitted along with the equipment.

1.1 TEST CATEGORIES

1.1.1 The following tests shall be conducted for acceptance of the equipment and the system before final acceptance of the system.

- i) Factory Acceptance Testing (FAT) report
- ii) Pre-commissioning test (after installation) for total integrated system.

Under exceptional circumstance, if it is not feasible to conduct Factory Acceptance Testing (FAT) at manufacturing facility, the equipment shall be accepted on the basis of certified manufacturer test report. In that case preliminary inspection of the equipment shall be arranged by the vendor at a suitable facility within India and detail inspection at site as per mutually agreed testing procedure. Exemption of inspection at factory premises (FAT) will be at the sole discretion of RailTel.

1.1.2 These tests shall be carried out on all equipment supplied by tenderer including those supplied by sub-vendors, if any. Tenderer shall arrange all necessary test instruments, manpower, test-gear, accessories etc.

1.1.3 All technical personnel assigned by Tenderer shall be fully conversant with the system specifications and requirements. They shall have the specific capability to make the system operative quickly and efficiently and shall not interfere or be interfered by other concurrent testing, construction and commissioning activities in progress. They shall also have the capability to incorporate any minor modifications/suggestions put forward by Purchaser/Engineer.

1.1.4 Test Plan: The Contractor shall submit to Purchaser 'Test Plans' well in advance of commencement of actual testing in each of the above-mentioned test categories. The plans shall include:

1.1.4.1 System/Equipment functional and performance description (in short) and Tests to be conducted and purpose of test.

1.1.4.2 Test procedures (including time schedule for the tests) and identification of test inputs details and desired/expected test results

1.1.5 Test Report: The observations and test results obtained during various tests conducted shall be compiled and documented to produce Test Reports by Tenderer. The Test Reports shall be given for each equipment/item and system as a whole. The report shall contain the following information to a minimum:

1.1.5.1 Test results

1.1.5.2 Comparison of test results and anticipated/expected (as per specifications) test result as given in test plans and reasons for deviations, if any.

1.1.5.3 The data furnished shall prove convincingly that:

- a. The system meets the Guaranteed Performance objectives
- b. Mechanical and Electrical limits were not exceeded.
- c. Failure profile of the equipment during the tests are well within the specified limits.

1.1.6 Failure of Cards/Components:

Till the system is accepted by the Purchaser, a log of each and every failure of cards/components shall be maintained. It shall give the date and time of failure, description of failed component/ card with serial no., lot no. etc., circuit, module, component designation, effect of failure of component on the system/ equipment, cause of failure, date and time of repair, mean time to repair etc. Repair/modification done at any point of time at one site shall be carried out by Tenderer at all the sites. Detailed documentation for the same shall be submitted to Purchaser for future reference.

If the malfunction and/or failures of a unit/module/sub-system/equipment repeat during the test, the test shall be terminated and Tenderer shall replace the necessary component or module to correct the deficiency. Thereafter, the tests shall commence all over again from the start.

If after the replacement the equipment still fails to meet the specification, Tenderer shall replace the equipment with a new one and tests shall begin all over again. If a unit/ subsystem/module have failed during the test, the test shall be suspended and restarted all over again only after the Tenderer has placed the Equipment back into acceptable operation. Purchaser's approval shall be obtained for any allowable logical time required to replace the failed component/unit/module/sub-system.

1.1.7 Re-adjustments:

No adjustments shall be made to any equipment/cards during the acceptance tests. If satisfactory test results cannot be obtained unless readjustments are made, Tenderer shall carry out only those readjustment needed to ready the equipment/system for continuance of tests. A log of all such adjustments shall be kept giving date and time, equipment, module, circuit, adjustments, reasons, test result before and after adjustment etc. Fresh acceptance tests shall be conducted after the readjustments have been completed.

1.2 FACTORY ACCEPTANCE TESTING (FAT)

Factory acceptance tests shall be carried out after review and approval of FAT procedure/documents as per bid requirements and review of Pre-Factory acceptance results & shall be conducted at the manufacturing facilities from where the respective equipment/subsystems are offered. The factory acceptance testing shall be conducted in the presence of the Purchaser/Engineer. The tests shall be carried out on all equipment/items including those supplied by Sub-vendors and factory acceptance certificates shall be issued. The factory tests shall include but not be limited to:

1.2.1 Equipment Testing:

- 1.2.1.1 Mechanical checks to the equipment for dimensions, inner and outer supports, finishing, welds, hinges, terminal boards, connectors, cables, painting etc.
- 1.2.1.2 Electrical checks including internal wiring, external connections to other equipment etc.
- 1.2.1.3 Check for assuring compliance with standards mentioned in the specifications.

- 1.2.1.4 Individual check on each/module/sub-assembly in accordance with the modes and diagnostics programs of the Tenderer.
- 1.2.1.5 Checks on power consumption and heat dissipation characteristics of various equipment.
- 1.2.1.6 Environment testing and other laid down tests in Type Tests plan of the specification of the equipment.
- 1.2.1.7 Functional testing.
- 1.2.1.8 Any other test not included in FAT document but relevant to the project as desired by the Purchaser/Engineer at the time of factory acceptance testing.

All equipment's materials fittings and components will be subject to inspection by the purchaser or his representative at the manufacturer's factory/tenderer works before dispatch and no materials shall be dispatched until these are inspected and/or approved.

Under exceptional circumstance, if it is not feasible to conduct Factory Acceptance Testing (FAT) at manufacturing facility, the equipment shall be accepted on the basis of certified manufacturer test report. In that case preliminary inspection of the equipment shall be arranged by the vendor at a suitable facility within India and detail inspection at site as per mutually agreed testing procedure. Exemption of inspection at factory premises (FAT) will be at the sole discretion of RailTel.

1.2.2 System Integration Testing

Functional and performance test should be conducted for the complete system/ all major equipment constituting the system (including the equipment supplied by sub-vendors, as applicable) simulating the complete network with appropriate network elements. All equipment shall be connected using the same cables (interfaces/components) as will be used during final installation so that the system can be tested in its final configuration. This testing shall be conducted at the manufacturing facility of the main equipment.

1.3 INSTALLATION:

After successful completion of Factory Acceptance Test or acceptance report of equipment on the basis of certified manufacturer test report, equipment shall be sent to site for installation.

All equipment shall be checked for completeness as per the specifications of equipment required for a particular station. Installation shall be carried out in accordance with the installation manuals and approved installation drawings in the best workmanship.

The contractor shall be responsible for ensuring that the work throughout are executed in the most substantial, proper and workman like manner with the quality of material and workmanship in strict accordance with the specifications and as per sound industrial practices and to the entire satisfaction of the RailTel.

If during installation and commissioning any repairs are undertaken, the maintenance spares supplied with equipment shall not be used for the repair. Tenderer shall arrange his own spare parts for such activities till such time the system has been finally accepted by the Purchaser. A detailed report & log of all such repairs shall be made available by the Tenderer to Purchaser/Engineer and shall include cause of faults and repair details, within two weeks of fault occurrence.

Tenderer shall supply all installation materials required for proper installation of the equipment. These shall include but not be limited to, all connectors, inter-bay and inter-equipment cables, power/earthing cables, connectors, anchoring bolts, nuts, screws, washers etc. as needed.

The bidder has to ensure that installation of equipment shall be done as to present neat and clean appearance in accordance with approved installation document drawings. All inter bay, power supply and other cables shall be routed through wall mounted cable trays. No cable shall be visible. Equipment installed at one of the site shall be made as model site and Tenderer shall take approval from Purchaser/engineer on various aspects etc.

1.4 PRE-COMMISSIONING

On completion of installation of equipment, the correctness and completeness of the installation as per Manufacturer's manual and approved installation documents shall be checked by the Tenderer on his own.

A list of Pre-Commissioning tests (same as approved by the Purchaser/Engineer for Site Acceptance Testing) and activities shall be prepared by Tenderer and the test shall be carried out by the Tenderer on his own. After the tests have been conducted to the Tenderer own satisfaction, the Tenderer shall provide the test results for review by Purchaser/Engineer and then offer the system for Site Acceptance Testing.

During pre-commissioning, if any fault occurs to any equipment or system, Tenderer shall identify the same and provide report/history of all faults to the Purchaser.

Tenderer shall ensure that the spares meant for operation and maintenance are not used during installation and commissioning.

1.5 PROVISIONAL ACCEPTANCE CERTIFICATE (PAC)

On installation of the equipment, the contractor shall certify and advise RailTel Supervisor where equipment has been installed, in writing that the installation is (i) completed (ii) ready for satisfactory commercial service and (iii) ready to be handed over. After successful completion of Site Acceptance Testing, a report (SAT) shall be forwarded to **Contract Management Authority**. Provisional Acceptance Certificate (PAC) will be issued by **Contract Management Authority**. PAC will not be held back for want of minor deficiencies not affecting the functioning of the equipment. Deficiencies, if any, pointed at the time of issuance of PAC, will be rectified by the contractor within one month.

1.6 FINAL ACCEPTANCE CERTIFICATE (FAC)

The final acceptance of the works completed shall take effect from the date of successful completion of 12 months after issue of PAC provided in any case that the contractor has complied fully with his obligations in respect of each item under the contract. The Final Acceptance Certificate against the contract shall be issued by **Contract Management Authority**. Notwithstanding the issue of Final Acceptance Certificate, the contractor and the purchaser shall remain liable for fulfillment of any obligation incurred under the provision of the contract prior to the issue of Final Acceptance Certificate which remains unperformed at the time such certificate is issued and for determining the nature and extent of such obligation the contract shall be deemed to remain in force between the parties hereto.

1.7 QUALITY ASSURANCE

1.7.1 Tenderer shall submit the details of Quality Assurance program followed by them beginning with raw materials, active, passive and fabricated components, units, sub-assemblies, assemblies, wiring, interconnections, structures etc. to finished product. Tenderer shall obtain and forward the Quality Assurance Program for equipment supplied by Sub-vendor, if any.

1.7.2 The Purchaser/engineer reserves the right to inspect and test each equipment at all stages of production and commissioning of the system. The inspection and testing shall include but not be limited to raw materials. Components, sub-assemblies, prototypes, production units, guaranteed performance specifications etc.

- 1.7.3 For inspection and testing, Tenderer shall arrange all that is required e.g. quality assurance personnel, space, test instruments etc. for successful carrying out of the testing by the Purchaser/Engineer, at Tenderer cost, at the Manufacturer's works/tenderer premises/site.
- 1.7.4 Purchaser/Engineer shall have free entry and access to any and all parts of the Manufacturer's facilities associated with manufacturing and testing of the system at any given time.
- 1.7.5 It shall be explicitly understood that under no circumstances shall any approval of the Purchaser/Engineer relieve the Tenderer of his responsibility for material, design, quality assurance and the guaranteed performance of the system and its constituents.
- 1.7.6 Tenderer shall invite the Purchaser/Engineer, at least 7 days in advance, of the date at which system shall be ready for Inspection and Testing. All relevant documents and manuals approved Engineering drawings etc. shall be available with the Purchaser/Engineer well in advance of the start of Inspection and Testing.
- 1.7.7 Purchaser or his representative shall, after completion of inspection and testing to their satisfaction, issue factory acceptance certificates to release the equipment for shipment. No equipment shall be shipped under any circumstances unless a factory acceptance certificate has been issued for it, unless agreed otherwise by Purchaser/Engineer.

CHAPTER-3-C

TRAINING, VENDOR DATA REQUIREMENT, DOCUMENTATION, AND DESIGN GUIDELINES

1. TRAINING

Tenderer shall provide comprehensive documentation, course material, manuals, literature etc. as required. Tenderer shall update the material of manuals in case there are any changes owing to revision/modifications in equipment/system specifications.

2. VENDOR DATA REQUIREMENT AND DOCUMENTATION

One set of Documentation (soft copy) shall be shall be uploaded at e-nivida tendering portal along with bids.. All documents and manuals shall be in English language only.

The following documents for the complete system shall be supplied and approved by Purchaser/Engineer to start inspection:

- a. System description, System configuration diagram & Connectivity diagram
- b. Detail technical manual of each type of equipment
- c. Equipment interconnection diagram including details of various interfaces, signaling protocols used at each stage.
- d. Layout of equipment and space requirements for each station.
- e. Installation manual including installation procedure and commissioning.
- f. Supervisory configuration, alarm list, operator interface etc.
- g. Maintenance manual of each type of equipment containing:
 - i. Trouble shooting/repairs procedures including failure analysis shall provide exhaustive information about repairs including but not limited to removal, reinsertion of components and cards, repairs, adjustments, tuning, calibration, tools required for a particular operation, test points, including turnaround time for repair and the details of the maintenance support service center to be furnished in the bid and all other maintenance related details.
 - ii. Expansion possibilities of the system without causing deterioration in the system performance.
 - iii. Any other data, document not specifically mentioned, but required for the satisfactory testing, installation and commissioning, operation and maintenance of the system shall be provided.
 - iv. Documents to be supplied after trial runs but before System commissioning (Acceptance of the System by Purchaser/Engineer).
- h. Preventive maintenance procedures.

3. DESIGN GUIDELINES

- i) Equipment shall conform to similar housing standards.
- ii) All patch cords shall be provided with connectors matching the cable used and shall have identification markings.
- iii) All sub-assemblies or modules/components shall be so mounted as to permit their replacement without appreciable disturbance to other components.

CHAPTER 4**COMMERCIAL TERMS & CONDITIONS****1. Offer letter and Validity of offer**

- 1.1. The bidder shall complete the offer letter (Chapter 1) and the Price Schedule (Chapter 2) furnished in the tender documents, indicating the goods to be supplied, description of the goods, associated technical literature, quantity and prices etc.
- 1.2. The offer should remain valid for a minimum period of 90 Days from the date of opening of tender as indicated in Bid Data Sheet (BDS) Chapter 5.

2. Warranty

- 2.1. The warranty would be valid for a period as indicated in Bid Data Sheet (BDS) Chapter 5. The supplier shall warrant that stores to be supplied shall be new and free from all defects and faults in material, workmanship and manufacture and shall be of the highest grade and consistent with the established and generally accepted standards of materials of the type ordered and shall perform in full conformity with the specifications and drawings. The supplier shall be responsible for any defects that may develop under the conditions provided by the contract and under proper use, arising from faulty materials, design or workmanship such as corrosion, inadequate quantity of material to meet equipment requirements, inadequate contact protection, deficiencies in design and/ or otherwise and shall remedy such defects at his own cost when called upon to do so by the Purchaser who shall state in writing in what respect the stores are faulty.
- 2.2. If it becomes necessary for the contractor to replace or renew any defective portion/portions of the supplies under this clause, the provisions of the clause shall apply to the portion/portions of the equipment so replaced or renewed or until the end of the above-mentioned period or twelve months, whichever may be later. If any defect is not remedied within a reasonable time of 30 days, the Purchaser may proceed to do the work at the contractor's cost, but without prejudice to any other rights which the Purchaser may have against the contractor in respect of such defects
- 2.3. Replacement under warranty clause shall be made by the contractor free of all charges at site including freight, insurance and other incidental charges.

2.4. Warranty Support

- 2.4.1. Material for repair during Warranty Period shall be handed over /taken over to contractors engineer at RailTel Data Center Secunderabad and Visakhapatnam PoP.
- 2.4.2. During the warranty period, the contractor shall be responsible to the extent expressed in this clause for any defects that may develop under the conditions provided for by the contract and under proper use, arising from faulty materials, design or workmanship in the plant, or from faulty execution of the plant by the contractor but not otherwise and shall remedy such defects at his own cost when called upon to do so by the Purchaser Engineer who shall state in writing in what respect the portion is faulty.
- 2.4.3. During the warranty maintenance period, contractor should stabilize the working of the system. If during the time any equipment etc. is to be added or deficiencies are to be rectified to make the system work trouble free the same also will have to be done by the contractor at no cost to RailTel as to make good all the deficiencies.
 - i. OEM should provide facility to RailTel for direct fault case open on TAC Support in case of emergency.
 - ii. The replacement services will be applicable during maintenance and warranty period.

- 2.4.4. After the proposed network is commissioned and placed in service and after Provisional Acceptance Certificate (PAC) is issued, the contractor shall be responsible for proper maintenance supervision of the network free of cost for a period of twelve months from the Successful commissioning of the solution.
- 2.4.5. To summarize, the total period of warranty as per BDS in Chapter-5, will comprise of first 12 months of Maintenance Supervision (after issue of PAC) extendable by RailTel for reasons as explained, as per para 2.5 above, posts which FAC will stand issued.

3. Long Term Maintenance Support : Deleted

4. Delivery Period

The materials as per SOR are required to be delivered within period as indicated in Bid Data Sheet (BDS, Chapter 5) to the site /transported to different locations which will be provided by RailTel to the successful bidder.

5. Payment Terms

- 5.1. Payment shall be made in Indian Currency (Rs.) 75% payment of the value of the supply items would be made on receipt of material by the consignee (at site / the stores) duly inspected and on submission of the following documents subject to any deductions or recovery which RailTel may be entitled to make under the contract:

- i) Tax Invoice (GST)
- ii) Delivery Challan/e-way bill.
- iii) Packing list.
- iv) Factory Test Report/Certified manufacturer Test Report
- v) Purchaser's Inspection certificate
- vi) Consignee receipt
- vii) Warranty certificate of OEM
- viii) Insurance certificate
- ix) Certificates duly signed by the firm certifying that equipment/ materials being delivered are new and conform to technical specification.

- 5.2. 15% payment of the value of Supply items of the PO shall be made by RailTel on successfully Installation & Commissioning at site, 5% payment of value of Supply items of the PO on issue of Provisional Acceptance Certificate (PAC) and the last 5% payment of the value of Supply items of the PO shall be made by RailTel on issue of Final Acceptance Certificate (FAC) which will be issued by **Contract Management Authority i.e. ED/SR**.

- 5.3. 15% payment of value of supply items of the PO which could not be installed and commissioned within 120 days due to site readiness or other reason on account of RailTel will be made with approval of **Contract Management Authority i.e. ED/SR** and remaining (5% + 5%) on issue of PAC and FAC as per clause 5.2.

- 5.4. RailTel shall make payments after the submission of invoice with required documents as per contract. Accounting/Bill passing unit for SOR for supplies is Corporate Office. All Bills shall be submitted to the **Contract Management Authority i.e. ED/SR** for certifying and verification and onwards submission to Finance of RailTel Corporate Office for releasing the payment.

6. Performance Bank Guarantee (Security Deposit):

- 6.1. The successful bidder has to furnish security deposit in the form of Performance Bank guarantee @ 10 % of issued PO/ LOA value, the same should be submitted within 30 days of issue of LOA/PO, failing which a penal interest of 15% per annum shall be charged for the delay period i.e. beyond 30 (thirty) days from the date of issue of LOA/PO. This PBG should be from a Scheduled Bank and should cover warranty period plus four months for lodging

the claim. The performance Bank Guarantee will be discharged by the Purchaser after completion of the supplier's performance obligations including any warranty obligations under the contract. PBG claim period should also be till 1 year after PBG Validity.

- 6.2. The earnest money shall be released on submission of PBG. The Performa for PBG is given in Chapter 6 Form No. 1. If the delivery period gets extended, the PBG should also be extended appropriately.
- 6.3. The Performance Bank Guarantee (security deposit) will bear no interest.
- 6.4. This PBG would be released after satisfactory completion of contract including warranty period plus 4 months.
- 6.5. A separate advice of the BG will invariably be sent by the BG issuing bank to the RailTel's Bank through SFMS and only after this the BG will become acceptable to RailTel. It is therefore in own interest of bidder to obtain RailTel's bank IFSC code, its branch and address and advise these particulars to the BG issuing bank and request them to send advice of BG through SFMS to the RailTel's Bank.
- 6.6. Extension of time for submission of PBG beyond 30 (thirty) days and up to 60 days from the date of issue of LOA/ Sub PO may be given with the approval of contract signing authority. However, a penal interest of 15% per annum shall be charged for the delay beyond 30(thirty) days, i.e. 31st day after the date of issue of LOA. In case the contractor fails to submit the requisite PBG even after 60 days from the date of issue of LOA/ Sub PO, the contract shall be terminated duly forfeiting other dues, if any payable against that contract. The failed contractor shall be debarred from participating in re-tender of the work. Performance Bank Guarantee/ Standing Bank Guarantee will bear no interest.

7. Taxes & Duties:

- 7.1. The price quoted in the offer should be firm, fixed indicating the break up and inclusive of all taxes and duties like import, custom, anti-dumping, CGST, IGST, SGST, UTGST etc. The offer should be inclusive of packing, forwarding, freight up to destination, insurance charges.
- 7.2. Bidder shall issue valid tax invoice to RailTel for availing proper credit of CGST/SGST/IGST/UTGST in case of award of contract. GST will not be reimbursed in the absence of valid tax invoice.
- 7.3. For all the taxable supplies made by the vendor, the vendor shall furnish all the details of such taxable supplies in the relevant returns to be filled under GST act.
- 7.4. If the vendor fails to comply with any of the above, the vendor shall pay to purchaser any expense, interest, penalty as applicable under the GST act.
- 7.5. In case of incorrect reporting of the supply made by the vendor in the relevant return, leading to disallowance of input credit to purchaser, the vendor shall be liable to pay applicable interest under the GST act to the credit of purchaser. The same provisions shall be applicable in case of debit/credit notes.
- 7.6. Tenderer shall quote all-inclusive rates, but there shall be break up of basic price and all type of applicable taxes such as SGST/CGST/IGST/UTGST along with respective HSN/SAC code under GST law (Including tax under reverse charges payable by the recipient).
- 7.7. Wherever the law makes it statutory for the purchaser do deduct any amount towards GST at sources, the same will be deducted and remitted to the concerned authority.

- 7.8.** The imposition of any new tax and/or increase/ in the aforesaid taxes, duties, levies, after the last stipulated date for the receipt of tender including extensions if any and the bidder there upon necessarily and properly pays such taxes/levies/cess, the bidder shall be reimbursed the amount so paid, provided such payments, if any, is not, in the opinion of RailTel attributable to delay in execution of work within the control of bidder. The bidder shall within a period of 30 days of the imposition of any such tax or levy or cess, give a written notice thereof to RailTel that the same is given pursuant to this condition, together with all necessary information including details of input credit relating thereto. In the event of no payment/default payment of any of the above taxes, RailTel reserves the right to withhold the dues/payments of bidder and make payment to states/central government authorities as may be applicable. However, if the rates are reduced after the last stipulated date for receipt of tender, bidder has to pass on the benefits to RailTel.
- 7.9.** In case of imported equipment:
Anti-Dumping duty if applicable on the equipment proposed to be supplied by OEM/Tenderer as per extant instructions of Ministry of Commerce/Finance Government of India, has to be borne by the tenderer and shall be deducted from the amount payable to the bidder at the time of making payment to the firm, if this duty amount is paid to custom Authority by RailTel.
- 7.10.** Inter se position of the offers will be determined on total unit rate on CIP destination basis which will include basic rate, custom duty, CGST, SGST, IGST, UTGST, freight, Insurance and any other charges or cost quoted by the tenderer, including GST payable on reverse charge by RailTel, whenever applicable.
- 7.11.** In regard to works contract, the tenderer should have registration no. for GST in respective state where work is to be executed and shall furnish GST registration certificate on award of LOA.

8. Insurance

- 8.1.** The Contractor shall take out and keep in force a policy or policies of insurance from the date, the delivery of material starts (including the transit portion) against all liabilities of the Contractor or the Purchaser. The contractor shall take out and keep in force a Policy or policies of Insurance for all materials covered in schedule of requirement irrespective of whether used up in the portion of work already done or kept for the use in the balance portion of the work until such material are provisionally handed over to RailTel. The goods will be issued by purchaser to supplier and risk of goods shall remain with supplier until the issue of PAC by RailTel. Insurance policy has to be kept valid by the contractor till issue of PAC by RailTel.
- 8.2.** The Contractor should ensure the stores brought to site, against risks as required under the Emergency Risk (Goods) Insurance Act in force from time to time up to contract value.
- 8.3.** It may be noted that the beneficiary of the insurance policy should be RailTel or the policies should be pledged in favor of RailTel. The contractor shall keep the policy/policies current till the equipment are handed over to the purchaser. It may also be noted that in the event of contractor's failure to keep the policy current and alive, renewal of policy will be done by purchaser for which the cost of the premium plus 20% of premium shall be recovered from the contractor.

9. Liquidated Damages

The timely delivery is the essence of this tender. Liquidated damages will be applicable at the rate of half (0.5 %) percent (including elements of taxes, duties, freight, etc.) per week or part thereof for undelivered portion of SOR subject to a maximum of 10% of the cost of Purchase order for any reason whatsoever attributed to failure of tenderer. RailTel will have the right to

cancel the order, place order on alternative source besides levying the liquidated damages as above.

10. Transportation

The rates quoted should be CIP destination. The destination shall be defined RailTel DC/DR or nominated office of RailTel in the proposed sections which shall be indicated by RailTel's representative.

11. Statutory Deduction

These will be made at source as per the rules prevalent in the area of work.

12. Qualification Criteria

Qualifying criteria under this clause lays down minimum acceptable qualifications in various areas to ensure that qualified tenderer has necessary experience, technical expertise, equipment and financial and human resources to successfully complete the project. Bids from bidder not meeting these qualification criteria shall be summarily rejected.

12.1. Eligibility Criteria for Bidder:

12.1.1. Bidder – The Bidder participated in the tender may be a sole Bidder / OEM / JV / Consortium.

SN	Basic Requirement	Eligibility Criteria Requirements	Supporting Document Required
1.	Legal Entity	The bidder should be a Company registered in India under the Companies Act (India) with their registered office in India should have been operating for the last three years. OR The bids from Consortium/ Joint Venture entity are also allowed.	Certificate of Incorporation / Registration or Memorandum of Association (MoA) In case of JV / Consortium, Agreement for Consortium/ Joint Venture.
2.	Financial Capability	The bidder should have received a minimum cumulative contract amount of Rs. 6,20,52,941/- . from the operations in the last three financial years plus current year up to the date of opening of tender. i) For Startups* (recognized by Department of Industrial policy and promotion, Ministry of Commerce and Industry) only 1/3 of minimum cumulative contract amount.	Certificates to this effect which may be an attested Certificate from the concerned department / client or Audited Balance Sheet duly certified by the Chartered Accountant / Certificate from Chartered Accountant duly supported by Audited Balance Sheet.
3.	Technical Capability	The tenderer must have successfully completed any of the following during last 03 (three) years, ending last day of month previous to the one in which tender is invited:	Completion certificates with Satisfactory working and value of the work completed from the User Organizations is required to be submitted. In case of composite work purchase orders, bidder shall

		<p>One order of similar work# for an amount not less than the amount Rs. 248.21 Lakhs, or Two similar works# each costing not less than the amount Rs. 165.47 Lakhs, or Three similar works# each costing not less than the amount Rs. 124.10 Lakhs.</p> <p>Note: Completion of work should fall in the above period. The bidder shall also furnish work completion/ substantial work completion certificate issued by customer/s for the Purchase Orders/ Work Orders.</p> <p># Similar Work: Projects of Supply, installation, and commissioning of Data Center Network Switches/Smart Rack/Software/SDN Controller Solution/Servers /Storage which in Government / PSUs / Telecom Service Providers network/ISP Network/ Public listed company.</p> <p>Note: ^ - Work experience certificate issued by Public listed company having average annual turnover of Rs 500 Cr and above in last 3 financial years excluding the current financial year, listed on National Stock Exchange or Bombay Stock Exchange, incorporated/registered at least 5 years prior to the date of opening of tender, shall also be considered provided the work experience certificate has been issued by a person authorized by the Public listed company to issue such certificates.</p>	<p>submit CA certificate certifying the actual amount pertaining to similar work definition as mentioned in the clause.</p> <p>(The set of document(s) submitted should clearly certify eligibility criteria and should be verifiable from the user/customer)</p>
4.	No Black Listing	The bidder (in case of consortium/JV, all members) including Sub contractors should not have been banned / blacklisted currently by Central Govt./State Govt./CPSU/any reputed Telecom service provider in India or anywhere globally by Government for the supply of material / security reasons.	Self-Declaration by the Bidder on Company's letter head
5.	Bidder Type	The Bidder or their promoters having equity stake or operating partnership in	Undertaking to be submitted by the Bidder

		bidder, should not be holding valid License for Telecom service provider/ISP/ NLD, Services License of Government of India for Telecom Operation.	
6.	MAF	Bidder should have authorization specific to this tender from respective OEM as per Form no. 4.	MAF as per Form no. 4.
7.	Bill of Material	The bidder should submit OEM vetted Bill of Material (BOM).	OEM vetted BOM.

Relaxations given in eligibility criteria for startups are indicative in nature and startup companies are required to submit their proposal for seeking relaxation in above mentioned eligibility criteria. Their proposal will be dealt on case-to-case basis only.

Note:

Credentials if submitted in foreign currency shall be converted into Indian currency i.e., Indian Rupee as under:

The conversion rate of US Dollars into Rupees shall be the daily representative exchange rates published by the Reserve Bank of India for the relevant date. Where, relevant date shall be as on the last day of month previous to the one in which tender is invited. In case of any other currency, the same shall first be converted to US Dollars as on the last day of month previous to the one in which tender is invited, and the amount so derived in US Dollars shall be converted into Rupees at the aforesaid rate. The conversion rate of such currencies shall be the daily representative exchange rates published by the International Monetary Fund for the relevant date.

Note: The Lead bidder should meet the eligibility criteria. In their own interest the tenderers, who form such consortia, are advised to investigate capabilities, availability of resources, experienced personnel, financial soundness, past experience and concurrent engagements of Constituting partners.

12.2. Eligibility Criteria Requirements for OEM’s:

OEMs of Switches, Servers, Storages, Load Balancer, Firewall, Cloud Solution & Backup Solution whose products are proposed to be used in this deployment should meet following criteria:

SN	Eligibility Criteria Requirements	Supporting Document Required
1.	<p>The Item offered by the OEM or Item/software of the same series/family from the same OEM should have been satisfactorily working in Government/ PSUs/ Telecom Service Providers/ Public Listed Company for at least 12 months as on date of opening of tender in India or Abroad.</p> <p>Work experience certificate issued by Public listed company having average annual turnover of Rs 500 Cr and above in last 3 financial years excluding the current financial year, listed on National Stock Exchange or Bombay Stock Exchange or any global stock exchange, incorporated/registered at least 5 years prior to the date of opening of tender, shall also be considered provided the work experience certificate has been issued by a person authorized by the Public listed company to issue such certificates.</p>	<p>Satisfactory Working certificate from End User clearly mentioning the make & model number of the offered Hardware.</p> <p>An undertaking by the OEM has to be submitted in support, in case issued satisfactory working certificate is the immediate predecessor of same series/family of the offered Hardware.</p>

SN	Eligibility Criteria Requirements	Supporting Document Required
2.	<p>The OEM should have supplied at least 35% of the tendered quantity 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.</p> <p>Work experience certificate issued by Public listed company having average annual turnover of Rs 500 Cr and above in last 3 financial years excluding the current financial year, listed on National Stock Exchange or Bombay Stock Exchange <i>or any global stock exchange</i>, incorporated / registered at least 5 years prior to the date of opening of tender, shall also be considered provided the work experience certificate has been issued by a person authorized by the Public listed company to issue such certificates.</p> <p>Note: For Startups*(recognized by Department of Industrial policy and promotion, Ministry of Commerce and Industry) only 1/3 of value as mentioned above is required.</p>	<p>OEM should submit self-certificate with proper contact detail of clients along with quantities supplied (Firm Name, Contact person, Designation, Telephone Number, Fax, Official mail id etc.). The same should be issued by authorized signatory.</p> <p>The self-certificate by OEM shall mention that the supplied Items/software are of same series/family or its immediate predecessor.</p> <p>RailTel reserves the right to verify PO reference and amount supplied from Purchaser Organization. POs issued in the name of System Integrator are also acceptable.</p> <p>For required quantity, multiple POs in favour of OEM's System Integrators are also acceptable.</p>
3.	<p>Undertaking by OEM on their respective letter Heads -</p> <p>a) OEM should have proven facilities for Engineering, manufacture, assembly, integration, testing and basic facilities with respect to space, Engineering, Personnel, Test Item, Manufacture, Training, Logistic Supports for at least past three years in the country from where the proposed Item are planned to be supplied. In case OEM is located outside India, it should have training, repair and service center facilities in India also (Point-A of form no. 7).</p> <p>b) OEM should not have been banned/blacklisted currently by Central Govt./State Govt./CPSU in India or anywhere globally by Government for security reasons (Point-B of form no. 7).</p> <p>c) Hardware and Software supplied by OEM should not have any malicious code (Point-C of form no. 7).</p> <p>d) The OEM shall ensure that Intellectual Property Rights of Hardware (including MAC address) and Source Code and of Software must not reside in any Country that shares a Land Border with India. Moreover, OEM must ensure that they are</p>	<p>Self- Declaration by the OEMs on Company's letter head for Point-A, B, C & D of Form no. 7.</p>

SN	Eligibility Criteria Requirements	Supporting Document Required
	<p>not getting 3rd party manufacturing from any Country that shares a Land Border with India.</p> <p>Note: OEM's from country that shares a Land Border with India are allowed to offer their products provided OEM's is registered with DPIIT as per Clause 4.A.18.6. (Point-D of form no. 7)</p>	

*Relaxations given in eligibility criteria are indicative in nature and startup companies are required to submit their proposal for seeking relaxation in above mentioned eligibility criteria. Their proposal will be dealt on case to case basis only.

Note: Bidder/OEM shall submit proper contact detail of all the users (Firm Name, Contact person, Designation, Telephone Number, Fax, Official mail id etc.) for all the certificates asked in the Qualification Criteria. The bidder is required to submit complete chain of credentials, e.g. purchase order (prices blanked out), showing relevant value of the PO and satisfactory working/implementation certificate issued by the user/customer. Purchase orders without relevant organization’s confirmation through a credential letter will not be considered as implementation certificate from the client.

12.3. RailTel reserves the right: -

- a) To verify, if so desired, the correctness of documentary evidence furnished by the tenderer.
- b) To verify the successful operation and performance of qualifying projects and tenderer shall arrange permission for the same.
- c) To carry out capability assessment of the bidder(s) including referral to in-house information.
- d) RailTel shall not be responsible for any delay in the receipt of tenders and reserves the right to accept/reject any or all tenders without assigning any reason.

13. System Performance Guarantee

13.1. The tenderer shall give unqualified and unconditional guarantee that when the equipment / material supplied by him is installed and commissioned at site, it shall achieve the desired objective and that in the event of performance of the system when installed not complying with the end objective or with the specifications, he shall provide further inputs to enable the RailTel to realize the end objectives with full compliance of the specifications contained in these documents. No additional payment will be made to the contractor for supply of any additional goods and service required in this regard.

13.2. This certificate in the Proforma given in **Chapter 6 Form No. 2**, shall accompany the final offer. Absence of this certificate which will form part of the agreement shall disqualify the tenderer automatically.

14. Evaluation of Offer:

14.1. For the purpose of relative ranking of offers, all-inclusive value for entire supply, supervision of installation, testing & commissioning and warranty period support and training shall be taken into account.

14.2. Additional features offered by the bidder, over and above the ones asked for in the tender documents, shall not be considered for evaluation of bids.

14.3. The tenderer should make available the offered products, if desired during technical evaluation of offered equipment for testing and benchmarking at any testing facility approved by RailTel.

14.4. The bidders should quote for all items & the offer will be evaluated in totality (Total Cost including Tax). The bidders should indicate brand name, type/model number of the products offered. The equipment should be supplied as per Technical Specifications given in **Chapter-3A**.

15. Security Considerations & Security Agreement

15.1. While evaluating the tender, regards would be paid to National Defence and Security considerations.

15.2. The directives issued from time to time by the Department of Telecommunications (DoT), Ministry of Communications and IT or any other Ministry of Govt. of India on security considerations shall be applicable to the present tender. Accordingly, as per the extent amendment of the National Long Distance (NLD) Service License Agreement for Security related concerns for expansion of Telecom Services in various zones of the country issued vide Department of Telecommunication, Ministry of Communication and IT, Govt. of India's letter no. 10-54/2010-CS-III (NLD) dated: 31.05.2011, the successful tenderer/OEM shall comply with the provisions stated in the above mentioned directive of DoT and shall have to enter into an agreement with RailTel as per the template agreement between Telecom Service Provider and the vendor of equipment, product and services (available on DoT website). The tenderer must submit a declaration along with their bid.

15.3. The Network is being provided primarily to meet the requirement of Indian Railways. Accordingly, the network shall take into consideration the National Security requirement and National Security aspects indicated by the Indian Railways.

16. Purchaser's Right to Vary Quantities

16.1. The purchaser shall be at liberty to enhance or reduce the quantity mentioned in the purchase order as indicated in Bid Data Sheet (BDS) Chapter 5 without assigning any reasons. The bidder shall comply with such modifications unconditionally provided these are made before completion of the deliveries under the purchase order. Any such change in quantity shall have no impact on the rates mentioned in the purchase order for any such item.

16.2. Operating Variations /rebate's are as follows:

(A) Upto extent of +/- 50% subject to following condition

- i. Upto +25% with no rebate.
- ii. From +25% to +40% with 2% rebate
- iii. From +40% to +50% with 4% rebate

(B) For variation beyond +50% of the quantity mentioned in the SOR may be done after proper negotiation with the selected bidder.

16.3. RailTel reserve the Right to remove any SOR item partially (OR) full quantity, due to site condition (OR) due to commercial implication.

17. Purchaser's Right to accept any offer / Bid and to reject any or all offer/ Bid

The Purchaser reserves the right to accept or reject any offer / bid, and to annul the bidding process and reject all offers / bids, at any time prior to award of order without assigning any reason whatsoever and without thereby incurring any liability to the affected bidder or bidders on the grounds for the Purchaser's action.

18. Execution of Purchase Order

- 18.1. The successful bidder has to submit the copy of the Purchase order duly signed on each page including Annexures & will submit the Performance Bank Guarantee as per Clause no. 6 for due fulfillment of the PO.
- 18.2. If the successful bidder fails to submit the accepted copy of PO and required PBG within 30 days from the date of issue, it shall constitute a breach of the agreement affected by the acceptance of the tender in which case the full value of the earnest money accompanying the tender shall stand forfeited without prejudice to any other rights or remedies. The Tenderer shall also submit the inspection plan, Implementation plan etc. within 30 days period.
- 18.3. In the event of any tenderer, whose tender is accepted, refuses to execute the PO as herein before provided, RailTel may determine that such tenderer has abandoned the Purchase Order and thereupon his tender and acceptance thereof shall be treated as cancelled and RailTel shall be entitled to forfeit the full amount of the Earnest Money and to recover the damages for such default.

19. Annulment of Award

Failure of the successful bidder to comply with the requirement of various clauses of tender document shall constitute sufficient ground for the annulment of the award and forfeiture of EMD in which event the Purchaser may make the award to any other bidder at the discretion of the Purchaser or call for new offers/ bids.

20. Earnest Money Deposit (EMD)/ Bid Security

- 20.1. The tenderer shall furnish a sum as given in Bid Data Sheet (BDS) Chapter 5 as Earnest Money through e-nivida Portal.
- 20.2. The EMD may be forfeited if a bidder withdraws his offer or modifies the terms and conditions of the offer during validity period and in the case of a successful bidder, if the bidder fails to accept the Purchase order and fails to furnish performance bank guarantee (security deposit) in accordance with clause 6.
- 20.3. Offers not accompanied with Earnest Money shall be summarily rejected.
- 20.4. Earnest Money of the unsuccessful bidder will be discharged / returned as promptly as possible but not later than 30 days after the expiry of the period of offer / bid validity prescribed by the Purchaser.
- 20.5. The successful bidder's EMD will be discharged upon the bidder's acceptance of the purchase order satisfactorily and furnishing the performance bank guarantee in accordance with clause 6.
- 20.6. Earnest Money will bear no interest.
- 20.7. **EMD exception for – UDYAM (MSME)**

For Small Scale Units / Micro Small Enterprises/ MSME registered with UDYAM under Ministry of MSME and participating in this tender, following exemptions shall be available.

- I. They shall be exempted from depositing Earnest money.

Firms registered with UDYAM under Ministry of MSME are exempted from submission of EMD and they are valid and in currency. Copy of certificate to be submitted along with tender bid.

These exemptions shall be applicable provided Tenderer registered with UDYAM and registration is current and valid. Firms claiming these exemptions are required to submit along with their offer, a copy of their current and valid UDYAM registration certificate, otherwise their offer would not be considered, will be treated as invalid and summarily rejected.

As mentioned in Section 7(4) of Ministry of MSME's Notification No. S.O2119 (E) dated 26th June, 2020, an enterprise registered with any other organization under the Ministry of MSME shall register itself under Udyam Registration. With effect from 01.07.2020, MSEs registered under Udyam Registration are eligible to avail the benefits under the Policy.

However, traders/ distributors/ sole agent/ Works Contract are excluded from the purview of Public Procurement Policy for MSEs Order, 2012. Further, as mentioned in O.M. No. 5/2(2)/2021-E/P & G/Policy dated 02.07.2021, Retail and Wholesale traders can register on Udyam Registration Portal for the purpose of Priority Sector Lending (PSL) only. Accordingly, in Udyam site if it is mentioned as below:



Then, the tenderer submitted Udyam certificate showing above in Udyam site will not be considered for exemption of EMD and their tender will be summarily rejected.

20.8. EMD exception for - DPIIT

Startups as recognized by Department of Promotion of Industry and Internal Trade (DPIIT).

21. Offer/ Bid Prices

21.1. The bidder shall give the prices indicating all levies and taxes, packing forwarding, freight and insurance etc. The basic unit price and all other components of the price need to be individually indicated against the goods it proposes to supply under the tender document as per schedule given in Chapter 2. The price shall be quoted in Indian Rupees or in any major foreign currency for the imported items (FOR/CIP destination).

21.2. The breakup of price of each item of SOR in terms of basic Unit price, Excise duty, Sales Tax, Freight, Custom Duty, Forwarding, Packing, Insurance and any other Levies/charges already paid or payable by the tenderer shall be quoted in the SOR Chapter 2. Any changes in statutory duties/taxes after opening of technical bid will be to RailTel's account within the contracted delivery period.

21.3. All prices and other information like discounts etc. having a bearing on the price shall be written both in figures and in words in the prescribed offer form (SOR). In case of difference in words and figures, the amount written in words will be taken into consideration. In the event of any discrepancy between total unit cost and total cost, the value shown in total unit cost will be taken for evaluation purpose.

21.4. Fall Clause: - The tenderer shall undertake that in case the tenderer offers same type of material at a lower price to any other purchaser including Central/State/ Government Organization or Public Sector Undertaking, during the validity of purchase order, the equal benefit of lower prices will be passed on to RailTel. The tenderer will submit an undertaking to this effect while claiming the payment.

22. Clause wise Compliance

Clause wise compliance statement of the Technical Specifications (Chapter 3) and Commercial Terms & Conditions (Chapter 4) shall be enclosed with the offer along with the technical literature of the material and other documents in support of relevant clauses.

23. Inspection

- 23.1. Pre-shipment / pre-dispatch inspection shall be carried out at manufacturer's / tenderer's works/site by RailTel's authorized representative. Traveling, lodging & boarding expenses of RailTel's representative and charges for 3rd party inspection if any shall be borne by RailTel but necessary facilities to carry out tests/witness inspection shall be provided by the manufacturer/ tenderer, free of cost. Under exceptional circumstance, if it is not possible to carry out pre-dispatch inspection at manufacturer's premises, Exemption for the same shall be obtained from competent authority.
- 23.2. Along with inspection call, the tenderer/manufacturer shall submit details of test procedures, test programs, test parameters together with permitted values, etc. and their Quality Assurance Plan.
- 23.3. In case material fails during inspection, the fresh lot of material shall be offered without any extra cost, by the manufacturer/tenderer. In such a case, total cost of re-inspection including travel, lodging & boarding of the inspecting officials shall be to manufacturer's/ tenderer's account.
- 23.4. In case necessary facilities to carry out tests/witness inspection is not available at tenderer site, such may be conducted at consignee site on basis of RailTel's approval against bidders request.

24. Force Majeure

- 24.1. If during the Agreement, the performance in whole or in part, by either party, of any obligation under this is prevented or delayed, by reason beyond the control of the parties including war, hostility, acts of the public enemy, civic commotion, sabotage, Act of State or direction from Statutory Authority, explosion, epidemic, quarantine restriction, strikes and lockouts (as are not limited to the establishments and facilities of the parties), fire, floods, earthquakes, natural calamities or any act of GOD (hereinafter referred to as EVENTS), provided notice of happenings of any such EVENT is given by the affected party to the other, within twenty one (21) days from date of occurrence thereof, neither party shall have any such claims for damages against the other, in respect of such non-performance or delay in performance. Provided service under this Agreement shall be resumed as soon as practicable, after such EVENT comes to an end or ceases to exist.
- 24.2. In the event of a Force Majeure, the affected party will be excused from performance during the existence of the Force Majeure. When a Force Majeure occurs, the affected party after notifying the other party will attempt to mitigate the effect of the Force Majeure as much as possible. If such delaying cause shall continue for more than sixty (60) days from the date of the notice stated above, the party injured by the inability of the other to perform shall have the right, upon written notice of thirty (30) days to the other party, to terminate this Agreement. Neither party shall be liable for any breach, claims, damages against the other, in respect of non-performance or delay in performance as a result of Force Majeure leading to such termination.

25. Settlement of Disputes and Arbitration

- 25.1. Any dispute or difference whatsoever arising between the parties out of or relating to the construction, meaning, scope, operation or effect of this contract or the validity or the breach thereof shall be settled by arbitration in accordance with the Arbitration and Conciliation Act, 1996 as amended and the award made in pursuance thereof shall be binding on the parties. The venue of such arbitration or proceedings thereof shall be at New-Delhi.
- 25.2. All arbitration proceedings shall be conducted in English. Recourse against any arbitral award so rendered maybe entered into court having jurisdiction or application may be made to such court for the order of enforcement as the case may be.

25.3. The Arbitral Tribunal shall consist of the Sole Arbitrator appointed by CMD/RailTel Corporation of India Limited, if the value of claim is up to Rs. 10 lakhs. If the value of the claim or amount under dispute is more than Rs. 10 Lakhs, the matter shall be referred to the adjudication of arbitral council. Chairman Managing Director (CMD) of RailTel Corporation shall furnish a panel of three names to the contractor, out of which, contractor will recommend one name to be his nominee and then CMD/RailTel shall appoint one name as RailTel's nominee and these two arbitrators with mutual consent shall appoint a third arbitrator who shall act as the deciding arbitrator in terms of Arbitration and Conciliation Act. The award of the sole arbitrator or the Arbitral council, as the case may be. shall be final and binding on both the parties.

25.4. Each of the parties agree that notwithstanding that the matter may be referred to Arbitrator as provided herein, the parties shall nevertheless pending the resolution of the Controversy or disagreement, continue to fulfil their obligation under this Agreement so far as they are reasonably able to do so.

26. Governing Laws

The Purchase Order shall be interpreted in accordance with the laws of India. The courts at New Delhi shall have exclusive jurisdiction to entertain and try all matters arising out of this contract.

27. Termination for Default

The purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default, sent to the Tenderer, terminate this contract in whole or in part.

27.1. If the tenderer fails to deliver any or all of the goods within the time period(s) specified in the contract.

27.2. If the tenderer fails to perform any other obligation(s) under the contract; and

27.3. If the tenderer, in either of the above circumstance(s) does not remedy his failure within a period of 30 days (or such longer period as the Purchaser may authorize in writing) after receipt of the default notice from the Purchaser.

27.4. In case of any of the above circumstances the RailTel shall pay the supplier for all products and services delivered till point of termination as per terms and conditions of the contract. However, any recovery and losses occurred to RailTel will be recovered from Contractor up to the value of contract.

28. Risk & Cost

If the contractor fails to deliver the equipment or honor the contractual commitment within the period fixed for such delivery in the contract, the Purchaser may terminate the Purchase contract in whole or in part, the Purchaser may proceed to purchase, upon such terms and in such manner as it deems appropriate, goods similar to those undelivered at no risk and cost to contractor. However, the security deposit of tenderer shall be forfeited/ Performance Bank Guarantee shall be encashed. The failed tenderer shall not be permitted to take part in the tender for balance work.

29. Termination for Insolvency

The purchaser may at any time terminate the Purchase order by giving written notice to the tenderer, without compensation to the tenderer, if the tenderer becomes bankrupt or otherwise insolvent as declared by the competent court provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Purchaser.

30. Rates during Negotiation

The tenderer/s shall not increase his/their quoted rates including payment terms in case the RailTel Administration negotiates for reduction of rates. Such negotiations shall not amount to cancellation or withdrawal of the original offer and the rates originally quoted will be binding on the tenderer/s.

31. Clarification Requests

It is solicited that the written queries/ clarifications may be sent to the RailTel’s office latest by date as indicated in the Bid Data sheet (BDS) through e-mail to armr@railtelindia.com and varma@railtelindia.com (in word format) & hard copy by post. The clarification should be submitted in the below given format:

SN	Page No	Tender Clause No.	Tender Clause	Bidders Query	Justification/Reason
1					

32. Submission of Offers

- 32.1. All offers in the prescribed forms should be submitted before the time and date fixed for the receipt of the offers.
- 32.2. In case the schedule of requirement quoted by tenderer is incomplete with reference to tender document, the offer is liable to be rejected.
- 32.3. ATTESTATION OF ALTERATION: No scribbling is permissible in the tender documents. Tender containing erasures and alterations in the tender documents are liable to be rejected. Any correction made by the tenderer/ tenderers in his/their entries must be signed (not initialed) by him/them.
- 32.4. The tenderer shall submit his bid online using the e-Procurement Portal <https://railtel.enivida.com/>. For detailed instructions please refer to e-nivida Portal.
- 32.5. The offer shall be submitted in single packet, shall be online using the e-Procurement Portal <https://railtel.enivida.com/> The bid shall consist of following documents:-
 - 32.5.1. Offer Letter complete.
 - 32.5.2. Schedule of Requirements with quantities but with prices blanked out (this will be a replica of price bid with prices blanked out).
 - 32.5.3. Earnest Money in prescribed form.
 - 32.5.4. Audited balance sheet duly attested by Notary Public.
 - 32.5.5. Constitution of Firm and Power of Attorney.
 - 32.5.6. Clause wise compliance to tender conditions.
 - 32.5.7. Copies of purchase orders and other documents in support of meeting qualifying criteria.
 - 32.5.8. Complete technical data and particulars of the equipment offered, as specified in the Tender papers together with descriptive literature, leaflets, Drawings, if any, complete with list etc.
 - 32.5.9. Documentary proof of equipment being proven and working for more than 6 months in India or outside India along with user certificate and Contact Details of user/firm.
 - 32.5.10. Technical proposal of tenderer in conformity with system design or alternative proposal of the tenderer, if any.
 - 32.5.11. System Performance Guarantee as per Chapter 6 Form no. 2
 - 32.5.12. The manufacturer claiming to qualify under the scope of rules for PMA (Preferential Market Access) must submit the declaration of VA (Value Addition) as required under the issued notification for the specified period (2017-18,2018-19 & 2019-20).

32.5.13. Any other information desired to be submitted by the tenderer.

32.5.14. NIL Deviation certificate.

33. Constitution of Firm and power of Attorney

33.1. Any individual(s) signing the tender or other documents connected therewith should specify whether he is signing:-

33.1.1. As sole proprietor of the concern or as attorney of the sole Proprietor.

33.1.2. As a partner or partners of the firm.

33.1.3. As a Director, Manager or Secretary in the case of Limited Company duly authorized by a resolution passed by the Board of Directors or in pursuance of the authority conferred by Memorandum of Association.

33.2. In the case of a firm not registered under the Indian Partnership Act, all the partners or the attorney duly authorized by all of them should sign the tender and all other connected documents. The original Power of Attorney or other documents empowering the individual or individuals to sign should be furnished to the Purchaser for verification, if required.

33.3. The RailTel will not be bound by Power of Attorney granted by the tenderer or by the changes in the composition of the firm made subsequent to the execution of the contract agreement.

33.4. In case where the Power of Attorney partnership deed has not been executed in English, the true and authenticated copies of the translation of the same by Advocate, authorized translators of Courts and Licensed Petition Writers should be supplied by the Contractor(s) while tendering for the work.

33.5. The duly notarized Power of Attorney shall be submitted online and Original copy is need to be submitted by the successful bidder before issuance of LOA.

34. Opening of Bids:

34.1. Bids received form the Bidders shall be opened on due date and time. The opening of the Bids shall be carried out in the physical presence of the designated representatives of RailTel and the Bidders. However, this RFP does not mandate the physical presence of the Bidders. The absence of the physical presence of the Bidders shall in no way affect the outcome of the evaluation of the Bids. During bid opening, only two authorized representatives of each bidder shall be allowed to be present.

34.2. RailTel shall subsequently examine and evaluate the Bids in accordance with the provisions set out in this Chapter.

34.3. To facilitate evaluation of Bids, RailTel may, at its sole discretion, seek clarifications in writing from any Bidder regarding its Bid.

35. Non-Transferability & Non-Refund ability

The tender documents are not transferable.

36. Errors, Omissions & Discrepancies

The Contractor(s) shall not take any advantage of any mis-interpretation of the conditions due to typing or any other error and if in doubt, shall bring it to the notice of the purchaser without delay. In case of any contradiction only the printed rules, and books should be followed and no claim for the mis-interpretation shall be entertained.

37. Wrong Information by Tenderer

If the tenderer/s deliberately gives/give wrong information in his/their tender which creates/create circumstances for the acceptance of his/their tender the RailTel reserves the right to reject such tender at any stage.

38. Bids along with supporting documents must be submitted online e-nivida portal only.

39. Offer / Bid should be uploaded on e-Nivida portal before due date and time of submission of offers/bids. The offers / bids shall be opened at 15:30 Hrs on the same day in the above office in the presence of those representatives of the bidders who choose to be present. Offers / Bids received after due date and time shall be dealt as per extant rules.

In case the date of opening happens to be a holiday, the tender will be received and opened at the same time on the next working day.

40. Limitation of Liability:

Provided the following does not exclude or limit any liabilities of either party in ways not permitted by applicable law:

40.1. The Supplier shall not be liable to the Purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Supplier to pay liquidated damages to the Purchaser; and

40.2. The aggregate liability of the Supplier to the Purchaser, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to any obligation of the Supplier to indemnify the Purchaser with respect to intellectual property rights infringement.

41. Credential Verification:

41.1. The tenderer shall submit along with the tender document, documents in support of his/their claim to fulfill the eligibility criteria as mentioned in the tender document. Each page of the copy of documents/ certificates in support of credentials, submitted by the tenderer, shall be self-attested/digitally signed by the tenderer or authorized representative of the tendering firm. Self-attestation shall include signature, stamp and date (on each page). Only those documents which are declared explicitly by the tenderer as "documents supporting the claim of qualifying the laid down eligibility criteria", will be considered for evaluating his/their tender.

41.2. The tenderer shall submit a notarized affidavit on a non-judicial stamp paper stating that they are not liable to be disqualified and all their statements/documents submitted along with bid are true and factual. Standard format of the affidavit to be submitted by the bidder is available in Chapter-6 of this tender document (**Form No. 3**). Non-submission of an affidavit by the bidder shall result in summary rejection of his/their bid and it shall be mandatory incumbent upon the tenderer to identify, state and submit the supporting documents duly self-attested by which they/he is qualifying the Qualification Criteria mentioned in the tender document. It will not be obligatory on the part of the RailTel to scrutinize beyond the submitted document of tenderer as far as his qualification for the tender is concerned.

a. The RailTel reserves the right to verify all statements, information and documents submitted by the bidder in his tender offer, and the bidder shall, when so required by the RailTel, make available all such information, evidence and documents as may be necessary for such verification. Any such verification or lack of such verification, by the RailTel shall not relieve the bidder of its obligations or liabilities here under nor will it affect any rights of the RailTel thereunder.

- b. In case of any wrong information submitted by the tenderer, the contract shall be terminated, Earnest Money Deposit (EMD), Performance Guarantee (PG) and Security Deposit (SD) of contract forfeited and agency barred for doing business on entire RailTel for 5 (five) years.

42. Mandatory updation of Labour Data on Railway's shramikkalyan portal:

42.1. Contractor is to abide by the provisions of Payment of Wages Act & Minimum Wages act in terms of clause 54 and 55 of Indian Railways General Condition of Contract. In order to ensure the same, an application has been developed and hosted on website 'www.shramikkalyam.indianrailways.gov.in'. Contractor shall register his firm/company etc. and upload requisite details of labour and their payment in this portal. These details shall be available in public domain. The Registration/updation of Portal shall be done as under:

- (a) Contractor shall apply for onetime registration of his company/firm etc. in the Shramikkalyam portal with requisite details subsequent to issue of Letter of Acceptance. Engineer shall approve the contractor's registration on the portal within 7 days of receipt of such request.
- (b) Contractor once approved by any Engineer, can create password with login ID (PAN No.) for subsequent use of portal for all LoAs issued in his favour.
- (c) The contractor once registered on the portal, shall provide details of his Letter of Acceptance (LoA)/Contract Agreements on shramikkalyan portal within 15 days of issue of any LoA for approval of concerned engineer. Engineer shall update (if required) and approve the details of LoA filled by contractor within 7 days of receipt of such request.
- (d) After approval of LoA by Engineer, contractor shall fill the salient details of contract labours engaged in the contract and ensure updating of each wage payment to them on shramikkalyam portal on monthly basis.
- (e) It shall be mandatory upon the contractor to ensure correct and prompt uploading of all salient of engaged contractual labour & payments made thereof after each wage period.

42.2. While processing payment of any 'On Account bill' or 'Final bill' or release of 'Advances' or Performance Guarantee/Security deposit', contractor shall submit a certificate to the Engineer or Engineer's representatives that "I have uploaded the correct details of contract labours engaged in connection with this contract and payments made to them during the wage period in Railway's Shramikkalyam portal at 'shramikkalyam.indianrailways.gov.in' till _____Month_____Year."

43. For Micro and Small Enterprises (MSEs):

43.1. "RailTel is registered with m1xchange TReDS Platform having Buyer registration Number "BUYER00001496". The URL for m1xchange Platform is <https://www.m1xchange.com>. MSE suppliers/vendors are required to register themselves on m1xchange Platform for availing the facility of bill discounting on TReDS portal. The bidder is mandatorily required to submit its TReDS registration number (as provided by M1xchange portal) and GRN (Goods/Service Receipt Note) Number (as provided by RailTel on delivery of Goods/Service) while submitting the invoices if requires to avail TReDS facility.

43.2. MSE Vendor will bear all costs relating to availing the facility of discounting on TReDS platform including but not limited to Registration charges, Transaction charges for financing,

Discounting Charges, Interest on financing, or any other charges known by any name shall be borne by MSE Vendor.

43.3. MSE Vendor hereby agrees to indemnify, hold harmless and keep RailTel and its affiliates, Directors, officers, representatives, agents and employees indemnified, from any and all damages, losses, claims and liabilities (including legal costs) which may arise from Sellers submission, posting or display, participation, in any manner, on the TReDS Platform or from the use of Services or from the Buyer's breach of any of the terms and conditions of the Usage Terms or of this Agreement and any Applicable Law on a full indemnity basis.

43.4. RailTel shall not be liable for any special, indirect, punitive, incidental or consequential damages or any damages whatsoever (including but not limited to damages for loss of profits or savings, business interruption, loss of information), whether in contract, tort, equity or otherwise or any other damages resulting from using TReDS platform for discounting their (MSE Vendor's) invoices.

44. NIL Deviation Compliance:

Bidder is required to submit the "NIL Deviation compliance undertaking" for all the terms and conditions of tender including all corrigenda with the offer as per proforma given in Form no. 8 (Chapter-6).

45. Contract Agreement:

On completion of the selection process, RailTel will enter into a contract agreement with the selected bidder(s). The contract entered with RailTel would be operated by RailTel. The Contract Agreement shall be entered by RailTel only after submission of valid Performance Guarantee by the successful bidder. Failure to do so shall constitute a breach of the agreement affected by the acceptance of the tender. In such cases the RailTel may determine that such tenderer has abandoned the contract and there upon his tender and acceptance thereof shall be treated as cancelled and the RailTel shall be entitled to forfeit the EMD and to forfeit other dues payable to the Contractor under this contract. The failed Contractor shall be debarred from participating in the re-tender for that work.

The following documents would form part of the agreement between RailTel & the successful bidder: -

- i) This tender document/RFP and all the issued addendum/ corrigendum.
- ii) The bidder's proposal in response to this tender/RFP and clarifications made in course of evaluation, including all Appendixes and supporting documents.
- iii) The implementation plan identifying the tasks to be completed, the assigned responsibilities and the scheduled completion dates.
- iv) Copy of Signed LOA along with the copy of the PBG document.

46. Bidders sharing a land border with India:

Office Memorandum F.No.6/18/2019-PPD dated 23.07.2020 by Ministry of Finance, Department of Expenditure, Public Procurement Division shall also apply to this tender. A certificate as per point D of Form No. 07 shall be submitted by all the bidders regarding their compliance with this order. If such certificate given by a bidder whose bid is accepted is found to be false, this would be a ground for immediate termination and further legal action in accordance with law. Registration should be valid at the time of submission of bids and at the time of acceptance of bids. In respect of supply otherwise than by tender, registration should be valid at the time of placement of order

47. Preference to make in India:

The provisions of the revised "Public Procurement (Preference to Make in India) Order 2017" dated. 15.06.2017 & dated 16.09.2020 (or subsequent revisions, if any till opening of tender)

by Department of Promotion of Industry and Internal Trade (DPIIT), GoI shall apply to this tender.

47.1. Local Content:

- i. Only Class-I local suppliers (meeting minimum 50% local content) & Class-II local suppliers (meeting minimum 20% local content) are eligible to participate in this tender.
- ii. Minimum Local Content shall be 50% for purchase preference or as per the Notification No. 18-10/2017-IP dated 29th August 2018 issued by Department of Telecommunications, Ministry of Communications and Notification No. 33(1)/2017-IPHW dated 14.09.2017 issued by MeitY or latest notification issued till opening of tender.
- iii. Among all qualified bids, the lowest bid will be termed as L1. If L1 is Class-I local supplier, the contract will be awarded to L1. If L1 is not Class-I local supplier, the lowest bidder among the Class-I local supplier, will be invited to match the L1 price subject to local supplier's quote price falling within the margin of purchase preference of 20%, and the contract shall be awarded to such Class-I local supplier subject to matching the L1 price. In case such lowest eligible Class-I local supplier fails to match the L1 price, the Class-I local supplier with the next higher bid within the margin of purchase preference of 20%, shall be invited to match the L1 price and so on and contract shall be awarded accordingly. In case none of the Class-I local supplier within the margin of purchase preference of 20%, matches the L1 price, the contract may be awarded to the L1 bidder. Please refer clause-4.A.41.1 of Chapter-4A of this tender.
- iv. As per para 9 of PPP-MIII order 16.09.2020, bidder shall be required to indicate percentage of local content and provide self-certification in his bid (without mention of any price) that the item offered meets the local content requirement for Class-I/Class-II local supplier, as the case may be and shall also give details of the location(s) at which the local value addition is made. In case of procurement for a value in excess of Rs. 10 Crores, the bidder shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content. Bidder shall upload the certificate along with their techno-commercial bid. The bidder shall also provide calculation of Local Content with price Break-up of "Local Content" and "Imported Content" for each SOR item as per DPIIT's PMI Policy and its clarifications and same shall be uploaded by the bidder along with their price bid. In case of any false declaration, action shall be taken in line with the provisions of the PPP-MIII order. Performa for self-certification regarding local content is given in the Notification No. 18-10/2017-IP dated 29th August 2018 issued by Department of Telecommunications.
- v. Self-certification of bidder as above shall be supported by the following certificate form Statutory Auditor engaged by the bidder, on the letter head of such Statutory Auditor. "We _____ the statutory auditor of M/s.____ (name of the bidder) hereby certify that M/s.____ (name of bidder) meet the mandatory Local Content requirements of the Project Work under this tender i.e. ___% (to be filled by the work center) quoted vide offer No.____ dated___ against RAILTEL tender No.____ by M/s. ____ (Name of the bidder).

Note: In case of bidder(s) for whom Statutory Auditor is not required as per law, required certificates shall be provided by a practicing Chartered Accountant.

- vi. 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.
- vii. Official website of Department of Promotion of Industry and Internal Trade (DPIIT) i.e. "<https://dpiit.gov.in/public-procurements>" may be referred by tenderers for above mentioned orders or any revision issued. Frequently Asked Question (FAQ) available there may also be referred by tenderers

CHAPTER- 5

BID DATA SHEET (BDS)

The section consists of provisions that are specific to various Clauses of the tender document Commercial Terms & Conditions Chapter 4.

Clause	Description
Clause 1.2	Validity of offer 90 days.
Clause 2	Warranty: 36/60 months from the Date of System Commissioning (PAC) or 40/64 months from the date of delivery (Only in case the delay in system commissioning is on the part of consignee) whichever is earlier.
Clause 4	Delivery Period: Supply, installation and commissioning within 120 days of issue of LOA/PO.
Clause 12	12.1 Bidder Eligibility Criteria 12.2 OEM Eligibility Criteria
Clause 16	Purchaser's Right to Vary Quantities: (B) Upto extent of +/- 50% subject to following condition i. Upto +25% with no rebate. ii. From +25% to +40% with 2% rebate iii. From +40% to +50% with 4% rebate (B) For variation beyond +50% of the quantity mentioned in the SOR may be done after proper negotiation with the selected bidder.
Clause 20	Earnest Money Deposit (EMD) Rs.8,27,400/- For exemption of EMD, pl see tender cl no. 20.7 & 20. 8 (Chapter 4, Commercial terms and conditions.
Clause 32	Clarification Requests: Last date of Submission of Clarification Date: 05.08.2024
Clause 33	Last Date of Submission of Offer Date: 13.08.2024 Time: 15:00 hours Venue: same as above
Clause 35	Date of Opening of Tender Date: 13.08.2024 Time: 15:30 hours Venue: same as above
Local Content	As per cl no. 3.7 (Vendor must submit the local content & average %.

CHAPTER- 6

Form No. 1

PROFORMA FOR PERFORMANCE BANK GUARANTEE BOND

(On Stamp Paper of Rs one hundred)

(To be used by approved Scheduled Banks)

1. In consideration of the RailTel Corporation of India Limited, having its Regional Office at 1-10-39 to 44, 6A, 6th Floor, Gumidelli Towers, Begumpet Airport Road, Opp. Shoppers Stop, Hyderabad- 500 016 AND Registered Office at Plate-A, 6th Floor, Office Tower-2, NBCC Building, East Kidwai Nagar, New Delhi-110023 (Herein after called RailTel) having agreed to exempt(Hereinafter called “the said Contractor(s)”) from the demand, under the terms and conditions of an Purchase Order No.....dated.....made between.....and..... for (hereinafter called “the said Agreement”) of security deposit for the due fulfillment by the said Contractor (s) of the terms and conditions contained in the said Agreement, on production of a Bank Guarantee for Rs. (Rs only). We (indicate the name of the Bank) hereinafter referred to as “the Bank”) at the request of Contractor(s) do hereby undertake to pay the RailTel an amount not exceeding Rs. against any loss or damage caused to or suffered or would be caused to or suffered by the RailTel by reason of any breach by the said Contractor(s) of any of the terms or conditions contained in the said Agreement.
2. We, Bank do hereby undertake to pay the amounts due and payable under this Guarantee without any demur, merely on demand from the RailTel stating that the amount is claimed is due by way of loss or damage caused to or would be caused to or suffered by the RailTel by reason of breach by the said Contractor(s) of any of terms or conditions contained in the said Agreement or by reason of the Contractor(s) failure to perform the said Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs.
3. We, bank undertake to pay to the RailTel any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) / Tenderer(s) in any suit or proceedings pending before any court or Tribunal relating thereto our liability under this present being, absolute and unequivocal. The payment so made by us under this Bond shall be a valid discharge of our liability for payment there under and the Contractor(s) / Tenderer(s) shall have no claim against us for making such payment.
4. We, Bank further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the RailTel under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till RailTel certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this Guarantee. Unless a demand or claim under the Guarantee is made on us in writing on or before the We shall be discharged from all liability under this Guarantee thereafter.
5. We,..... (indicate the name of Bank) further agree with the RailTel that the RailTel shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the Agreement or to extend time of to postpone for any time or from time to time any of the powers

Form No. 2

PROFORMA FOR THE SYSTEM PERFORMANCE GUARANTEE
(On Stamp Paper of Rs. One hundred)

**To,
Executive Director,
RailTel Corporation of India Limited
6A, 6th Floor, Gumidelli Towers,
Sardar Patel Rd, Old Patigadda,
Prakash Nagar, Begumpet,
Hyderabad, Telangana 500016**

I / We hereby guarantee that the design on the basis of which we have submitted our tender no. has been carefully made to conform to the end objectives in the tender documents and to technical specification therein. We further guarantee that in the event of the performance of the system, when installed, not complying with the end objectives or with the specifications contained in the tender documents, we shall provide further inputs to enable the RailTel to realize the end objectives contained in these documents without any additional payment for any additional equipment which may be required in this regard. We further guarantee that all the expenses for providing the additional inputs under the System Guarantee will be borne by us. We further guarantee that these additional inputs will be provided by us to make the system workable within 1 month from the date on which this guarantee is invoked by the Purchaser. The guarantee is valid for a period of one year from the date of commissioning of the system.

(Signature of Firm's Authorized Officer)
Seal

Signature of witness:

1.
2.

Form No. 3

FORMAT FOR AFFIDAVIT TO BE UPLOADED BY TENDERER ALONGWITH THE TENDER DOCUMENTS

(To be executed in presence of Public notary on non-judicial stamp paper of the value of Rs. 100/-

The paper has to be in the name of the tenderer) **

I..... (Name and designation)** appointed as the attorney/authorized signatory of the tenderer (including its constituents),

M/s _____(hereinafter called the tenderer) for the purpose of the Tender documents for the work of _____ as per the tender No. _____ of (RailTel Corporation of India Ltd.), do hereby solemnly affirm and state on the behalf of the tenderer including its constituents as under:

1. I/we the tenderer (s), am/are signing this document after carefully reading the contents.
2. I/we the tenderer(s) also accept all the conditions of the tender and have signed all the pages in confirmation thereof.
3. I/we hereby declare that I/we have downloaded the tender documents from RailTel website www.railtelindia.com, <https://railtel.enivida.com/>, I/we have verified the content of the document from the website and there is no addition, no deletion or no alternation to be content of the tender document. In case of any discrepancy noticed at any stage i.e. evaluation of tenders, execution of work or final payment of the contract, the master copy available with the RailTel Administration shall be final and binding upon me/us.
4. I/we declare and certify that I/we have not made any misleading or false representation in the forms, statements and attachments in proof of the qualification requirements.
5. I/we also understand that my/our offer will be evaluated based on the documents/credentials submitted along with the offer and same shall be binding upon me/us.
6. I/we declare that the information and documents submitted along with the tender by me/us are correct and I/we are fully responsible for the correctness of the information and documents, submitted by us.
7. I/we undersigned that if the certificates regarding eligibility criteria submitted by us are found to be forged/false or incorrect at any time during process for evaluation of tenders, it shall lead to forfeiture of the tender EMD besides banning of business for five years on entire RailTel. Further, I/we (insert name of the tenderer)** _____ and all my/our constituents understand that my/our constituents understand that my/our offer shall be summarily rejected.
8. I/we also understand that if the certificates submitted by us are found to be false/forged or incorrect at any time after the award of the contract, it will lead to termination of the contract, along with forfeiture of EMD/SD and Performance guarantee besides any other action provided in the contract including banning of business for five years on entire RailTel.

DEPONENT
SEAL AND SIGNATURE
OF THE TENDERER

VERIFICATION

I/We above named tender do hereby solemnly affirm and verify that the contents of my/our above affidavit are true and correct. Nothing has been concealed and no part of it is false.

DEPONENT

SEAL AND SIGNATURE
OF THE TENDERER

Place:

Dated:

****The contents in Italics are only for guidance purpose. Details as appropriate, are to be filled in suitably by tenderer. Attestation before Magistrate/Notary Public.**

Form No.: 4

Performa for **Manufacturer Authorization Form**

To,
Executive Director,
RailTel Corporation of India Limited
6A, 6th Floor, Gumidelli Towers,
Sardar Patel Rd, Old Patigadda,
Prakash Nagar, Begumpet,
Hyderabad, Telangana 500016

Dated:

Subject: Manufacturer Authorization form (MAF) to M/s for

Ref: Tender No.....dated.....

Dear Sir,

We, M/s....., are established and reputed manufacturer and service provider of(Product details), having our registered office at

We hereby authorise M/s (bidder name), Office to participate in bid and subsequently upon award of the bid to execute the supply and Installation & Commissioning of our range of products against your above said bid.

We further extend our warranty for years for our range of products offered by M/s against the above-said bid.

Thanking you,
Best regards,

Authorised Signatory

Form No.: 5

PROFORMA FOR THE LONG-TERM MAINTENANCE SUPPORT
(To be signed by the OEM)

To
Executive Director,
RailTel Corporation of India Limited
6A, 6th Floor, Gumidelli Towers,
Sardar Patel Rd, Old Patigadda,
Prakash Nagar, Begumpet,
Hyderabad, Telangana 500016

Tender Reference No.:

~~I / We hereby confirm that we have read specifications & tender conditions of RailTel Tender No.and accept that the requirement of Long Term Maintenance Support as per Clause 3 of Chapter 4 shall be met by Authorized Distributor/Partner of OEM. However, if Authorized Distributor/Partner fails to fulfill the support obligation due to any un-foreseen circumstances, the same shall be provided by us directly or through our subsidiary/authorized partner in India for the mentioned/remaining period at the quoted prices by the bidder. I/We have gone through the requirement mentioned in the Tender Document and shall provide services as per terms and conditions pertaining to Long Term Maintenance Support of tender document.~~

(Signature of OEM's Authorized Officer)

_____ Seal

Signature of witness:

.....

.....

FORM No.: 06

Format for Power of Attorney

POWER OF ATTORNEY

[To be executed on non-judicial stamp paper of the appropriate value in accordance with relevant Stamp Act. The stamp paper to be in the name of the company who is issuing the power of attorney.]

We, M/s.____ (name of the firm or company with address of the registered office) hereby constitute, appoint and authorize Mr. or Ms.____ (Name and residential address) who is presently employed with us and holding the position of _____, as our Attorney to do in our name and our behalf all or any of the acts, deeds or things necessary or incidental to our RFP for the Project ____ (name of the Project), including signing and submission of the RFP response, participating in the meetings, responding to queries, submission of information or documents and generally to represent us in all the dealings with Client or any other Government Agency or any person, in connection with the works until culmination of the process of bidding till the Project Agreement is entered into with _____ (Client) and thereafter till the expiry of the Project Agreement.

We hereby agree to ratify all acts, deeds and things lawfully done by our said Attorney pursuant to this power of attorney and that all acts, deeds and things done by our aforesaid Attorney shall and shall always be deemed to have been done by us.

(Add in the case of a Consortium)

Our firm is a Member or Lead bidder of the Consortium of _____, _____ and _____.

Dated this the ____ day of ____ 2024

(Signature and Name of authorized signatory)

(Signature and Name in block letters of all the remaining partners of the firm Signatory for the Company)

Seal of firm Company

Witness 1:

Witness 2:

Notes:

- a. To be executed by all the members individually.
- b. The Mode of execution of the power of attorney should be in accordance with the procedure, if any laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.

Form No. 7

OEM Undertaking on Letter Head
(To be signed by the OEM)

To
Executive Director,
RailTel Corporation of India Limited
6A, 6th Floor, Gumidelli Towers,
Sardar Patel Rd, Old Patigadda,
Prakash Nagar, Begumpet,
Hyderabad, Telangana 500016

Sub: OEM Undertaking

Ref: Tender No.....dated.....

Dear Sir,

Over and above all our earlier conformations and submissions as per your requirements of the RFP, we confirm that,

A. We undertake/Certify that

“We have proven facilities at (Complete Address along with Pin Code) for Engineering, manufacture, assembly, integration, testing and basic facilities with respect to space, Engineering, Personnel, Test equipment, Manufacture, Training, Logistic Supports for at least past three years in the country from where the proposed equipment are planned to be supplied.”

“In case OEM is located outside India, we have training, repair and service center facilities in India at(Complete Address along with Pin Code) also.”

B. I/We have not been black-listed or debarred currently by Central Govt./State Govt./CPSU in India or anywhere globally by Government for security reasons either in Individual capacity or as a member of partnership firm/LLP/JV/Society/Trust.

C. We Certify that,

(i) All proposed hardware and software components in scope of supplies when shipped by _____, does not contain embedded malicious code that would activate procedures to:-

- a. Inhibit the desired and designed function of the equipment.
- b. Cause physical damage to the user or equipment during the exploitation.
- c. Tap information resident or transient in the equipment/networks.

(ii) We, _____ will be considered to be in breach in case physical damage or malfunctioning is caused due to activation of any such malicious code in embedded software and thus be liable to repair, replace or refund the price of the infected software if reported (or, upon request, return) to the party supplying the software to Customer, if different than _____

(iii) Security breach or damages to system, if any, so caused by any embedded malicious code or otherwise, due to the act of either OEM or bidder or both, the OEM as well as the bidder would be considered liable jointly or severally and shall be banned for conducting any business with RailTel. Also the present contract, may liable to be terminated by the purchaser.

- D. We certify that our offered products are genuine, have our own manufacturing setups and IPR for the hardware(s)/software(s), and not have 3rd party manufacturing from any company blacklisted in India or abroad (due to proven backdoor access and data vulnerability) or any company sharing land border with India. The Intellectual Property Rights (IPR) of all offered product and source code of all offered software including camera firmware, switch firmware etc. are not residing in countries sharing land borders with India. Proof of IPR & source code will be provided by the OEM.

or

IPR of offered products and source code of offered software including camera firmware, switch firmware etc. are residing incountry (Please mention the country name) and OEM has been registered with the Competent Authority of Govt. of India and are eligible to be considered(evidence of valid registration by the competent authority is enclosed)

In case any breach or false declaration is found at any stage, immediate strict penal action can be taken by RailTel.

Seal and signature of the authorized representative of OEM

Place:

Date:

Form No. 8

**PROFORMA FOR
Nil Deviation Component Compliance Undertaking Letter
(TO BE SIGNED BY BIDDER)**

To
**Executive Director,
 RailTel Corporation of India Limited
 6A, 6th Floor, Gumidelli Towers,
 Sardar Patel Rd, Old Patigadda,
 Prakash Nagar, Begumpet,
 Hyderabad, Telangana 500016**

Dear Sir,

Sub: NIL Deviation Compliance for Tender no.

Over and above all our earlier conformations and submissions as per your requirements of the RFP, we confirm that,

1. We will ensure our unconditional compliance of all the terms and conditions as mentioned in the Tender document. In case of any deviation, the same should be attached as an Annexure (as per Format given below) to this form. **In case of any deviation, RailTel reserves the right to reject the bid without giving any justification.**

Format of Annexure (Deviation Statement)

S. No.	Clause No. & Chapter No.	Existing Clause of Tender	Proposed Clause	Remarks, if any

2. All the proposed Hardware and Software to be supplied as per technical specifications mentioned in Chapter-3-A of Tender document.
3. We hereby certify that the hardware and software mentioned in our technical solution and Bill of Material (BOM) are complete.
4. We confirm that there is no requirement of any other hardware and software to fulfill requirements as per scope against the RFP. If any additional hardware and software is required to meet in scope requirements, then it would be provided by us at no extra cost to RailTel.

Seal and signature of the bidder

Place:

Date:

(This Form along with Annexure (if required) should be on the letterhead of the bidder duly signed by an authorized signatory)

Form no. 9

CONTRACT AGREEMENT

(CA No.)

This AGREEMENT is made at <Location of RailTel Office> on this day of _____ two thousand and twenty four by and between RailTel Corporation of India Limited (A Govt. of India Undertaking) having its Registered & Regional office at Plat-A, 6th Floor, Office Block-II, East Kidwai Nagar, New Delhi-110023, acting in the premises through Executive Director or his authorized representative (hereinafter referred to as 'RailTel', which expression should unless repugnant to the context or meaning thereof include its successors and permitted assigns) of the one part;

And _____ having its registered office at ----- acting in the premises through..... (hereafter referred to as "Contractor", which expression should unless repugnant to the context or meaning thereof include its successor and permitted assigns) of the other part.

Whereas in response to a call for Tender by RailTel for the work of "....." for RailTel Corporation of India Limited as per tender papers at Annexure 'A' read with Corrigendum..... issued by RailTel hereto, the Contractor has submitted offer letter as per Annexure 'B' hereto

AND WHEREAS the said Tender of the Contractor has been accepted for the work of "....." for RailTel Corporation of India Limited as per copy of Letter of Acceptance of Tender No. _____ dated _____ complete with enclosures at the accepted rates and agreed deviations from tender papers as per Annexure-C hereto at contract value of Rs. _____ (Rupees _____ Only) duly accepted by the contractor.

Now this agreement witnesses that in consideration of the premises and the payment to be made by the Purchaser (RailTel) to the Contractor provided for herein, the Contractor shall supply all equipment and materials and execute and perform all works for which the said Tender of the Contractor has been accepted strictly according to the various provisions in Annexure 'B' and 'C' hereto and upon such supply, execute and performance to the satisfaction of the purchaser (RailTel) and the purchaser (RailTel) shall pay to the Contractor at the rates accepted as per the said Annexure 'C' and in terms of the provisions therein.

IN WITNESS whereof both the parties have hereunto set and subscribed their respective hands and/or seals on the day and year respectively mentioned against their respective signatures.

Signed and delivered by Shri _____ for and on behalf of RailTel Corporation of India Ltd.

The contract within named in the presence of:

1. Signatures
Date
Name in Block Capitals
Address:
2. Signatures
Date
Name in Block Capitals
Address:

Signed and delivered by Shri. _____ for and on behalf of

The contractor within named in the presence of:

1. Signatures
Date
Name in Block Capitals
Address:

2. Signature
Date
Name in Block Capitals
Address:

Annexure 'A': Tender Document No..... with Corrigendum(s), if any.

Annexure 'B': Contractor's offer letter.

Annexure 'C': Letter of Acceptance No..... with all enclosures.

Annexure 'D': Copy of Performance Bank Guarantee (PBG)

Form no. 10

Self Certification under Preference to "MAKE IN INDIA" Policy

CERTIFICATE

In line with Government Public Procurement Order No. P-45021/2/2017-BE-II dt. 15.06.2017, as amended from time to time and as applicable on the date of submission of tender, we hereby certify that we M/s (supplier name) are local supplier meeting the requirement of minimum Local content (50%) as defined in above orders for the material against Tender No

Details of location at which local value addition will be made is as follows:

We also understand, false declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rule for which for which a bidder or its successors can be debarred for up two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.

Seal and Signature of Authorized Signatory

(End of Tender Document)