

08/06/2018



RAILTEL
(A Govt. of India Enterprise)
CIN No U64202DL2000GOI107905

TENDER NOTICE

**E-Tender Notice No. RailTel/ Tender/OT/CO/Mktg/2018-19/Station Wi-Fi/441
Dt: 06.06.2018**

RailTel Corporation of India Ltd. invites **Request for Proposal (online bids) for Selection of Managed Wi Fi Service Provider for installation and maintenance of Wi-Fi services at 302 B Category & 363 C Category Railway Stations and monetization from 302 B Category & 464 C Category stations through specified revenue streams on a 50:50 revenue share with minimum guaranteed revenue model** as per specifications and schedule of requirements of tender document.

Tender Notice & tender document will be available on RailTel's website www.railtelindia.com and e-Tendering portal <https://www.tcil-india-electronictender.com> for downloading.

Opening Date of RFP Downloading	: 08.06.2018
Date and time of Pre Bid Meeting	: 25.06.2018 at 1530 hrs
Due Date and time of Submission of RFP	: 16.07.2018 till 1500 hrs
Date and time of Opening	: 16.07.2018 at 1530 hrs
Earnest Money Deposit (EMD)	: Rs. One (1) Crore
Tender Fees	: Rs.20000/-
Contact Person and Contact No/email	: ED/EB kmr@railtelindia.com

Note: Any modification/corrigendum will be published in the RailTel website and the e-tendering portal www.tcil-india-electronictender.com only.

Office Address and Contact:

RailTel Corporation of India Ltd.

Corporate Office, Plot No. 143, Sector- 44, Gurgaon-122003, Hararyana.

Tel: +91 124 2714000, FAX: +91-124-4236084

For more details please Visit – www.railtelindia.com

Tender no. - *RailTel/Tender/OT/CO/Mktg/2018-19/Station Wi-Fi/441*

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RailTel Corporation of India Ltd.
143, Institutional Area, Sector-44
Gurgaon-122003 (NCR), Tel. No.: +91 124 2714000,
FAX: +91 124 4236084

Tender Number: *RailTel/Tender/OT/CO/Mktg/2018-19/Station Wi-Fi/441*

Request for Proposal ('RFP') for

“Selection of Managed Wi Fi Service Provider for installation and maintenance of Wi-Fi services at 302 B Category & 363 C Category Railway Stations and monetization from 302 B Category & 464 C Category stations through specified revenue streams on a 50:50 revenue share with minimum guaranteed revenue model”

Last Date for submission - 16.07.2018

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Section I

Invitation to Bidders

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Section I – Invitation to Bidders

1. This invitation to Bidder is for Request for Proposal ('RFP') for Selection of Managed Wi Fi Service Provider for installation and maintenance of Wi-Fi services at 302 B Category & 363 C Category Railway Stations and monetization from 302 B Category & 464 C Category stations through specified revenue streams on a 50:50 revenue share with minimum guaranteed revenue model.
2. For revenue monetization, additional 101 C-Category Wi-Fi completed stations will also be provided to the successful bidder. The revenue streams shall be Advertisement, Mobile Wi-Fi Data Offload (MDO), Paid wifi and any other services based on wi-fi technology proposed by the bidders. Any other services which are not based on wi-fi will not be allowed under this RFP.

List of B Category stations is placed at Clause 7.3 of section-V of this RFP.

List of C Category stations (including Wi-Fi ready stations) is placed at Clause 7.1 & 7.2 of section-V of this RFP.

The number of stations may be increased or decreased by 10% due to reclassification of stations category by Indian Railways or inclusion of stations of any other Railway in the Scope of the work. In that case the minimum guaranteed payment to RailTel will be changed proportionately.

3. ***Bidder/s have to bid for both category stations (B and C). Bid shall be rejected if quoted for any one category stations.***
4. The RFP document in relation to the above work includes Section I to Section V (which have been detailed in **Clause 3 of Section II**) of the document relating to Instruction to Bidders and any amendment / corrigendum issued after the release of the RFP, which shall be an integral part of the RFP.
5. Bidders are advised to study the RFP Document carefully. Submission of response to RFP shall be deemed to have been done after careful study and examination of the RFP Document with full understanding of its implications. Sealed offers prepared in accordance with the procedures enumerated in Section II of this RFP shall be submitted to RailTel not later than the date and time laid down, at the address given in the RFP.
6. Bidders are advised to visit the site locations for better understanding of the RFP. In case the Bidders wish to visit the site, they must inform and coordinate with RailTel at least 3 days before the visit. RailTel will accommodate to arrange join visit on the request of bidder for maximum 2 stations.
7. An Earnest Money Deposit (EMD) of Rs.1,00,00,000/- (**Rupees One Crore only**), in the form of **Demand Draft issued by a Nationalized / Scheduled Bank** valid for 90 (Ninety) days from the date of bid submission must accompany all bids. The Demand Draft issued by Nationalized / Scheduled bank should be drawn in favour of "RailTel Corporation of India Limited" payable at New Delhi. The validity of demand draft may also be extended on the request of RailTel.
 - 7.1. **Bids not accompanied by Cost / Payment Receipt of RFP document and / or EMD shall be treated as non-responsive.**

8. Schedule for Invitation of RFP

- a) **Name of RailTel:**
RailTel Corporation of India Limited
- b) **Addressee and Address for, submission of RFP responses and bid opening:**
ED (Enterprise Business)
RailTel Corporation of India Ltd, Plot No 143,
Sector 44, Institutional Area,
Opposite to Gold Souk, Gurgaon,

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Haryana- 122003
Phone no. 0124 2714072, Fax 0124 4236084,
Email: kmr@railtelindia.com

c) Details of the contact person for any clarification:

P Vikrant Kumar, DGM(Mktg)
RailTel Bhavan, Plot No 143,
Sector 44, Institutional Area,
Opposite to Gold Souk, Gurgaon,
Haryana- 122003
Phone no. 0124 2714072, Fax 0124 4236084,
Email: vikrantk@railtelindia.com

d) Date till which the response to the RFP should be valid: 180 (One hundred and eighty) days from the date of opening of the Bids.

9. Important dates:

The following table provides information regarding the important dates of the bid process for this RFP:

ACTIVITY	DATE AND TIME
Date of Issue of RFP	08 June, 2018
Last date for submission of queries on the RFP for Pre-bid Conference:	23 June, 2018 (15:00 Hrs)
Pre-Bid Meeting	25 June, 2018 (15:30 Hrs)
Last Date and time for Submission of Bids	16 July, 2018 (15:00 Hrs)
Technical Bid opening	16 July, 2018 (15:30 Hrs)

10. The RFP document can be downloaded from RailTel website (<http://www.railtelindia.com>) or from <https://www.tcil-india-electronictender.com>. The bid shall be accompanied by a payment of **Rs. 20,000 (Rupees Twenty thousand only)**, which is inclusive of GST) in the form of a Demand Draft issued by Nationalized / Scheduled bank or Bankers cheque in favour of “RailTel Corporation of India Limited” payable at New Delhi. Please note that the RFP response of a bidder would not be entertained in case they do not pay the cost of RFP document as per the details mentioned above.
11. The cost of RFP document is non-refundable and the RFP document is non-transferable.
12. Within 15 days of the receipt of notification of award/selection from RailTel, the successful Bidder shall furnish the Financial bank guarantee issued by a Nationalized / Scheduled Bank as per clause 22 of section II in the Financial bank guarantee prescribed at Form 7 of “Section IV: Bid Submission Formats and Proformas”.

Note: Bidders must note that bids received after due date and time shall be rejected.

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SECTION II:

Instructions to Bidders

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Section II – Instructions to Bidders

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1 Procedure for Submission of Bids

1.1 Online Submission:

Submission of Bids only through online process is mandatory for this Tender. E-Tendering is a new methodology for conducting Public Procurement in a transparent and secured manner. Now, the Government of India has made e-tendering mandatory. Suppliers/ Vendors will be the biggest beneficiaries of this new system of procurement. For conducting electronic tendering, RailTel has decided to use the portal <https://www.tcil-india-electronictender.com> through TCIL, a Government of India Undertaking. This portal is based on the most 'secure' and 'user friendly' software from Electronic Tender®. A portal built using Electronic Tender's software is also referred to as Electronic Tender System® (ETS). Benefits to Suppliers are outlined on the Home-page of the portal.

Tender Bidding Methodology:

Sealed Bid System - 'Single Stage - Double Envelope': In this, bidder has to submit Technical bid as well as commercial via "ONLINE MODE".

1.2 Broad outline of activities from Bidders Perspective:

- a. Procure a Digital Signing Certificate (DSC)
- b. Register on Electronic Tendering System (ETS)
- c. Create Users and assign roles on ETS
- d. View Notice Inviting Tender (NIT) on ETS
- e. Download Official Copy of Tender Documents from ETS (Important)
- f. Clarification to Tender Documents ETS
- g. Bid-Submission on ETS
- h. Attend Public Online Tender Opening Event (TOE) on ETS.
- i. View/Post-TOE Clarification posted by RailTel on ETS (Optional), Respond to RailTel's Post-TOE queries

For participating in this tender online, the following instructions need to be read carefully. These instructions are supplemented with more detailed guidelines on the relevant screens of the ETS.

1.3 Digital Certificates

For integrity of data and its authenticity/ non-repudiation of electronic records, and be compliant with IT Act 2000, it is necessary for each user to have a Digital Certificate (DC) also referred to as Digital Signature Certificate (DSC), of Class 2 or above, issued by a Certifying Authority (CA) licensed by Controller of Certifying Authorities (CCA) [refer <http://www.cca.gov.in>].

1.4 Registration

To make use of the Electronic Tender portal ([https:// www.tcil-india-electronictender.com](https://www.tcil-india-electronictender.com)), vendor needs to register on the portal (if not registered earlier). Registration of each organization is to be done by one of its senior persons who will be the main person coordinating for the e-tendering activities. In ETS terminology, this person will be referred to as the Super User (SU) of that organization. For further details, please visit the website/portal (<https://www.tcil-india-electronictender.com>) and click on the 'Supplier Organization' link under 'Registration' (on the Home Page), and follow further instructions as given on the site.

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Pay Annual Registration Fee as applicable.

Note: After successful submission of Registration details and Annual Registration Fee (as applicable), please contact TCIL/ ETS Helpdesk (as given below), to get your registration accepted/activated.

TCIL Helpdesk

Contact Person Telephone/ Mobile, E-mail ID

Helpdesk Executives: 91-11-26202699 (Multiple lines)

E-mail ID: ets_support@tcil-india.com

(Mobile Nos. for Emergency Help): 9868393775, 9868393717, 9868393792

RailTel Contact (for general Information)

P Vikrant Kumar

DGM/Marketing

Phone no. 0124 2714072, Fax 0124 4236084

1.5 Bid related Information for this Tender (Sealed Bid)

The entire bid-submission would be online on ETS.

Broad outline of submissions are as follows:

- a. Submission of Bid Security/ Earnest Money Deposit (EMD)
- b. Submission of digitally signed copy of Tender Documents/Addenda
- c. Two ` (Part I –Credential/ Techno commercial Bid and Part II - Price Bid)
The electronic envelope consists of Main bid and Electronic Form (both mandatory) and Bid Annexures (Optional).
- d. Online response to General Terms & Conditions (GTC) and Special Terms & Conditions (STC)
- e. (Optional) Online Submission of modification, substitution bids for technical or financial parts, or **withdrawal bid**.

NOTE: Bidder must ensure that after following above, the status of bid submission must become “Complete” indicating successful submission of the online bid.

NOTE: The Bidder has to upload the Scanned copy of all above original documents as Bid-Annexures during Online Bid-Submission.

1.6 Offline Submissions:

The bidder is required to submit the following documents offline to RailTel Corporation of India Ltd, Institutional Area Plot 143, Sector 44, Gurgaon before due date & time of submission of bids specified in covering letter of this tender document, in a Sealed Envelope. The envelope shall bear (the tender name), the tender number and the words ‘DO NOT OPEN BEFORE’ (due date & time).

- a. Documents against eligibility and evaluation criteria as per clause 17 & 18 of this section

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- b. EMD-Bid Security in Original, in favour of RailTel Corporation of India, Payable at New Delhi. (with Tender No., Name of Firm & Mob. No. written on back side of envelope A)
- c. DD/ Bankers cheque in original against payment of tender fee in favour of RailTel Corporation of India, Payable at New Delhi. (with Tender No., Due date of Opening of Tender, Name and contact No. of Firm written on back side of DD)
- d. Power of attorney to be submitted in accordance with Tender Conditions.
- e. Manufacturer's Authorization Form

NOTE: The Bidder has to upload the Scanned copy of all above original documents as Bid-Annexures during Online Bid-Submission.

1.7 Submission of Eligibility Criteria related documents

Eligibility criteria related documents as applicable shall also be scanned and submitted ON LINE. Copy of these documents shall also be submitted in RailTel Office before Tender opening date. Online Bids without these documents will be summarily rejected.

1.8 Special Note on Security of Bids

Security related functionality has been rigorously implemented in ETS in a multi-dimensional manner. Starting with 'Acceptance of Registration by the Service Provider', provision for security has been made at various stages in Electronic Tender's software. Security related aspects as regard Bid Submission are outlined below:

As part of the Electronic Encrypted functionality, the contents of both the 'Electronic Forms' and the 'Main-Bid' are securely encrypted using a Pass-Phrase created by the Bidder himself. Unlike a 'password', a Pass-Phrase can be a multi-word sentence with spaces between words e.g. (I love this World). A Pass-Phrase is easier to remember and more difficult to break. It is recommended that a separate Pass-Phrase be created for each Bid-Part. This method of bid-encryption does not have the security and data-integrity related Vulnerabilities which are inherent in e-tendering systems which use Public-Key of the specified officer of a Buyer organization for bid-encryption. Bid-encryption in ETS is such that the Bids cannot be decrypted before the Public Online Tender Opening Event (TOE), even if there is connivance between the concerned tender-opening officers of the Buyer organization and the personnel of e-tendering service provider.

Typically, 'Pass-Phrase' of the Bid-Part to be opened during a particular Public Online Tender Opening Event (TOE) is furnished online by each bidder during the TOE itself, when demanded by the concerned Tender Opening Officers who will open the bid. Else Tender Opening Officer may authorize the bidder to open his bid himself. There is an additional protection with SSL Encryption during transit from the c,t-end computer of a Supplier organization to the e-tendering server/ portal.

(Mandatory Additional Methods of passphrase submission):

Additionally, the bidder shall make sure that the Pass-Phrase to decrypt the relevant Bid-Part is submitted to RailTel in a sealed envelope before the start date and time of the Tender Opening Event (TOE) along with other offline submissions.

1.9 Public Online Tender Opening Event (TOE)

ETS offers a unique facility for 'Public Online Tender Opening Event (TOE)'. Tender Opening Officers as well as authorized representatives of bidders can attend the Public Online Tender Opening Event (TOE) from the comfort of their offices. For this purpose, representatives of bidders (i.e. Supplier organizations)

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fully authorized are requested to carry a Laptop and Wireless Connectivity to Internet.

Every legal requirement for a transparent and secure 'Public Online Tender Opening Event (TOE)' has been implemented on ETS. As soon as a Bid is decrypted with the corresponding 'Pass-Phrase' as submitted online by the bidder himself (during the TOE itself), salient points of the Bids are simultaneously made available for downloading by all participating bidders. ETS has a unique facility of 'Online Comparison Chart' which is dynamically updated as each online bid is opened. The format of the chart is based on inputs provided by the Buyer for each Tender. The information in the Comparison Chart is based on the data submitted by the Bidders in Electronic forms. A detailed Technical and/ or Financial Comparison Chart enhance transparency. Detailed instructions are given on relevant screens.

ETS has a unique facility of a detailed report titled 'Minutes of Online Tender Opening Event (TOE)' covering all important activities of 'Online Tender Opening Event (TOE)'. This is available to all participating bidders for 'Viewing/ Downloading'.

There are many more facilities and features on ETS. For a particular tender, the screens viewed by a Supplier will depend upon the options selected by the concerned Buyer.

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, during e-auction, it is the bidder's responsibility to have backup internet connections.

In case there is a problem at the e-procurement/ e-auction 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 re-schedule the affected event(s).

1.10 Other Instructions

For further instructions, the vendor should visit the home-page of the portal (<https://www.tcil-india-electronictender.com>) and go to the User-Guidance Centre.

The help information provided through 'ETS User-Guidance Centre' is available in three categories - Users intending to Register / First-Time Users, Logged-in users of Buyer organizations, and Logged-in users of Supplier organizations. Various links are provided under each of the three categories.

Note: It is strongly recommended that all authorized users of Supplier organizations should thoroughly peruse the information provided under the relevant links and take appropriate action. This will prevent hiccups and minimize teething problems during the use of ETS.

1.11 Key Instructions

The following KEY INSTRUCTIONS for BIDDERS' must be assiduously adhered to:

1. Obtain individual Digital Signing Certificate (DSC or DC) well in advance of your first tender submission deadline on ETS.
2. Register your organization on ETS well in advance of your first tender submission deadline on ETS.
3. While registering your organization on ETS Portal of TCIL, pl. make sure that the email id of Super user provided for registration and email-id on which Digital Signature Certificate of the Super user is issued are exactly the same.
4. Get your organization's concerned executives trained on ETS well in advance of your first tender submission deadline on ETS.
5. Bidder should ensure that **official copy of tender document** has been downloaded by clicking the radio button for confirmation else e-Procurement system will not permit the bidder to participate in

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the tendering process.

6. Submit your bids well in advance of tender submission deadline on ETS as there could be last minute problems due to internet timeout, breakdown, etc.

1.12 Minimum Requirements at Bidders end

1. Computer System with good configuration (Min P-IV, 1 GB RAM, Windows XP)
2. Broadband connectivity
3. Microsoft Internet Explorer 6.0 or above
4. Digital Certificate (s) for users

1.13 Vendors Training Program

One day training (10:00 to 17:00) on how to use the ETS Portal for e-Tendering would be provided. Training is optional. However, if a vendor has not already attended ETS Vendor Training earlier, it is highly recommended that the vendor attends this training positively to be able to submit the e-Tender smoothly without any problem. Vendors are requested to carry a Laptop and Wireless Connectivity to Internet while attending the ETS Vendor Training

Tentative Dates

xx xx, 2018

Venue

RailTel Corporation of India Limited,
Plot No. 143, Sector-44,
Opp. Gold Souk Mall,
Gurgaon -122003.

Vendors Training Charges :Rs. 2,800/-(Per Participant) per training day

Mode of Payment of Fees: DD drawn in favour of M/s TCIL, New Delhi & payable at New Delhi.

2 Cost of Bidding Process

- 2.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, including cost of site visits etc. for the purposes of clarification of the bid, if so desired by RailTel.

3 Contents of the RFP Document

- 3.1 The Scope of Work, tender procedures and Contract terms are prescribed in this RFP Document. The RFP Document includes:

SECTION	CONTENTS
Section I	Invitation to Bidders
Section II	Instruction to Bidders
Section III	Contract Conditions
Section IV	Bid Submission Formats & Proforma
Section V	Scope of Work

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- 3.2 The Bidder should examine all instructions, forms, terms & conditions, and scope of work in the RFP Document and furnish all information as stipulated therein.

3.3 **Instruction to bidders for forward e-auction**

The selection of the bidder shall be done through an e-auction process. The auction would be conducted on electronic platform created by Telecommunications Consultants India Limited (a Government of India enterprise) and no physical bids shall be accepted or considered. RailTel would carry out the auction on floor price derived from the minimum guarantee revenue to RailTel received in the financial bid .

1. In case of any discrepancy between amount in figures and in words, the amount in words shall govern.

Business Rules for auction

S#	Parameter	Value
1	Date and Time of Forward-Auction Bidding Event	Will be communicated later
2	Duration of Forward-Auction Bidding Event	1 Hour
3	Round	Single
4	Automatic extension of the 'Forward-Auction Closing Time', if last bid received is within a 'Pre-defined Time-Duration' before the 'Forward-Auction Closing Time'	Yes
4.1	Pre-defined Time-Duration	10 Minutes
4.2	Automatic extension Time-Duration	10 Minutes
4.3	Maximum number of Auto-Extension	Unlimited
5	Criteria of Bid-Acceptance	As per RFP/ subsequent corrigendum
6	Entity – Start-Price	Will be communicated later
7	Minimum Bid-Increment	Will be communicated later

3.3.1 Training to bidders:

- RailTel will facilitate training for participation in auction either on its own or through the service provider for the auction.
- One day training (10:00 to 17:00) would be provided by TCIL. Training is optional. Vendors are requested to carry a Laptop and Wireless Connectivity to Internet.

Scheduled Date	Will be communicated later
Venue	RailTel Corporate Office, Gurgaon, Haryana
Vendors Training Charges (Per Participant)	Rs. 3,000/- (Plus Applicable Taxes)

For further assistance please contact TCIL Helpdesk as specified below.

Customer Support: +91-11-26241790 (Multiple Telephone lines)
Emergency Mobile Numbers: +91-9868393792, 9868393717, 9868393775
Helpdesk email ID: ets_support@tcil-india.com

- On request where necessary, RailTel/service provider may also conduct a 'mock auction' to familiarize the bidders with auction process.
- Any bidder not participating in training and/or 'mock auction' shall do so at his own risk and it shall not be open for him to make any request / complaint / grievance later.

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5. Each bidder shall participate in the training at his / their own cost.
6. The venue, date, time etc. for training in auction shall be advised at the appropriate time.
7. No request for postponement/fixing of training date/time shall be entertained which in the sole view and discretion of RailTel might result in any avoidable delay to either the Auction or the whole process of selection of bidder.

3.3.2 Process of Registration

1. Minimum Requirement:
 - 1.1. Computer System having configuration with minimum Windows 7 or above,
 - 1.2. Broadband connectivity
 - 1.3. Microsoft Internet Explorer 7.0 or above
 - 1.4. Digital Certificate(s)
2. Procure a Digital Signing Certificate (DSC)
3. Register on Electronic Tendering System ® (ETS)
4. Create **Forward-Auction Authority (FAs)**, Users. It is mandatory to create at least one FA.
5. **Allied Corporate Activities -> Forward Auction Authority -> Manage Forward Auction Authority -> Create..**
6. To view Forward-Auction Notice on ETS, kindly follow the underlying sequence:
 - 6.1. **E-SecureAuction Activities -> Respond to e-Forward Auction-> List of e-Forward Auction.**
7. To assign your relevant e-Forward Auction to an FA, kindly follow the underlying sequence :
 - 7.1. **e-SecureAuction Activities -> Respond to e-Forward Auction-> List of e-Forward Auction -> Details-> Assign FASC to MA.**
8. Then proceed to Forward Auction Overview page :
 - 8.1. **e-SecureAuction Activities -> Respond to e-Forward Auction-> e-Forward Auction Overview**
9. On e-Forward Auction Overview Page, go to Forward Auction Administration section and perform the **Forward-Auction Activities Authorization and Forward Auction Bidding Event Authorization.**
10. Log into the **Forward-Auction Room.**

3.3.3 Auction Fee

Each Bidder shall pay a non-refundable fee of INR 10,000 + Taxes as auction fee which can be paid online through Debit/ Credit Card/Net Banking in favor of “Telecommunications Consultants India Limited”

3.3.4 Digital Signature Certificate

1. Each Bidder shall ensure that its authorized signatory has a valid Digital Signature Certificate (DSC) of at least class II issued by any of the certifying authorities listed on the Auction Portal.
2. One user can only participate in only one auction at any particular point of time. Each of the Bidders shall safely keep the User ID and password issued to them upon registration on the Auction Portal since these details are necessary for participating in the e-Auction.
3. The Bidders shall be obligated not to disclose their User ID and password or other material information relating to the Bidding Process to each other or any third party and shall safeguard the secrecy of such details.

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4. The Bidders are advised to change their password immediately upon receipt from the Auction Portal.

3.3.5 Date/time of Auction

1. The date and time of commencement of auction which is the 'Auction Time' is mentioned in the note above.
2. Any force majeure or other condition leading to postponement of auction shall entitle RailTel to postponement of auction even after communication, but RailTel shall be obliged to communicate to all participating bidders the 'postponement' prior to commencement of such 'Auction'.

3.3.6 Details about the Auction Portal Screen

1. At any time during the e-Auction, the highest Financial Bid of a participating bidder prevailing at that time shall be visible to the participating bidders on the Auction Portal.
2. At any time during the e-Auction, information with respect to the identity of and the number of other participating bidders and their details shall not be made visible to any participating bidder.

3.3.7 Conduct of Auction

On the date of e-Auction, the auction process will commence at the time specified by RailTel ("Auction Start Time") on the Auction Portal and shall continue and last for a duration of 1 (one) hour, ending at Auction End Time subject to any time extension, as per the terms and in the manner described below.

In the event a Financial Bid is received during the last 10 (ten) minutes before the scheduled Auction End Time, the close time of the e-Auction will be automatically extended by 10 (ten) minutes from the time the last Financial Bid is received in order to give equal opportunity to all other Participating Bidders. This process of auto extension will continue till occurrence of a time period of 10 (ten) minutes during which no Financial Bid is received on the Auction Portal. For avoidance of doubt it is clarified that in case during any extended period of 10 (ten) minutes no further bid higher than the last quoted highest bid is received, the auction sale will be automatically closed at the expiry of the said extended 10 (ten) minutes and the Participating Bidder whose Financial Bid is the highest at the end of such extended time will be said to have quoted the highest minimum commitment bid.

Illustration; Assuming that the initial Auction End Time for a particular electronic auction is 1200 hours and a Financial Bid is received at 1155 hours, the scheduled Auction End Time shall be revised to 1205 Hours. Again, if a Financial Bid is received at 1204 hours, the scheduled close time shall be revised to 1214 hours and so on.

Further, in the event that no further Financial Bid is received till 1214 hours, the electronic auction will close at 1214 hours. The Participating Bidder with the Financial Bid at 1214 hours shall be declared as Bidder with highest minimum commitment bid.

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3.3.8 Proxy Bid

1. Through proxy bid provision in the auction process the bidder can feed in the system directly in strict confidence the initial quote and the highest bid amount up to which it intends to quote. The system automatically will keep his quote increasing by specified incremental amount as soon as some other bidder quotes amount higher than proxy bidder's last quote. This obviates the need for him participating in the bidding process until the proxy bid amount is incremented/ surpassed/ reached by other bidders.
2. When proxy bid amount is reached, the bidder has an option to revise the proxy bid amount or he can prefer to start participating in bidding process.
3. The service provider will clarify the proxy bidding in detail during training.

3.3.9 Transparency in Bids

1. All bidders will be able to view during the auction time the current highest price in portal. Bidder shall be able to view not only the highest bid but also the last bid made by him at any point of time during the auction time.

3.3.10 Masking of Names

1. Names of bidders shall be masked in the Auction process and bidders will be given suitable dummy names.
2. After completion of Auction, the service provider / auctioneer shall submit a report to RailTel with all details of bid and the original names of the bidders and also the H1 bidder (bidder with highest commercial offer) with his / their original names.

3.3.11 Start Price

1. Auction process shall commence at and after electronically loading the "FLOOR PRICE" on the basis of minimum commitments quoted by the bidders. The FLOOR PRICE for each region has been mentioned in section 1.1.1 and 1.1.2 above.

3.3.12 Incremented Bid Value

1. The bidders shall be able to bid only at a specified increment value or multiples thereof or any other value more than the minimum incremental bid value (STEP_SIZE). The bid increment value amount for each region has been mentioned in section 1.1.1 and 1.1.2 above. .
2. For the sake of convenience of bidders, the web portal shall display the next possible incremented value of bid. It is not, however, obligatory on the part of bidders to bid at the next immediate higher level only. (That is, bids can be even at 2 or 3 levels higher than the immediate higher level.)

3.3.13 Auction Process

1. In order to reduce the time involved in the selection process, RailTel shall be entitled to complete the entire process through a single Auction.
2. RailTel shall however, be entitled to cancel the Auction process, if in its view procurement or Auction process cannot be conducted in the interest of RailTel.

3.3.14 Changes in Business Rules

1. Any change in Business Rules as may become emergent and based on the experience gained may be made by RailTel.

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2. Any/ all changes made in Business Rules shall be uploaded in the Website of RailTel (www.RailTelindia.com) immediately.
3. If any auction process has commenced and a change is made in Business Rules, it shall be informed immediately to each bidder participating in the Auction and his concurrence to/ acceptance of the change shall be obtained in writing by RailTel.

3.3.15 Do's and Don'ts applicable to the Bidders

1. No bidder shall involve himself/ itself or any of his/ its representatives in any price manipulation directly or indirectly with other bidders. If any such practice comes to the notice, RailTel shall disqualify the bidders concerned from the e-tendering process.
2. Bidder shall not disclose details of his bids or any other details concerning Auction process of RailTel to any other third party without specific permission in writing from RailTel.
3. Neither RailTel nor service provider/ auctioneer can be held responsible for consequential damages such as no power supply, system problem, inability to use the system, loss of electronic information, power interruptions, UPS failure, etc. at bidders' place. (RailTel shall, however, entertain any such issues of interruptions, problems with open mind and fair degree of transparency in the process before deciding to stop or extend the auction.)
4. Get your organization's concerned executives trained for e-Forward Auction related processes on ETS well in advance of the start of e-Forward Auction.
5. Create a Forward Auction Authority (FA) for your organization on ETS well in advance of the start of e-Forward Auction.
6. For responding to any particular e-Forward Auction, the e-Forward Auction (i.e. its Forward Auction Search Code or FASC) has to be assigned to an FA.
7. It is important for each bidder to thoroughly read the 'rules and related criterion' for the e-Forward Auction as defined by the Seller organization/ Auctioneer.
8. If applicable for an e-Forward Auction (such as in case of a Direct e-Forward Auction which is not preceded by a sealed-bid stage), pay your EMD on ETS well in advance of the start of e-Forward Auction bidding.
9. If applicable for an e-Forward Auction (such as in case of a Direct e-Forward Auction which is not preceded by a sealed-bid stage), pay the Bid Processing Fee well in advance of the start of e-Forward Auction bidding.
10. It is important to digitally-sign your 'Final bid' after the end of e-Forward Auction bidding event.
11. Obtain individual Digital Signing Certificate (DSC or DC) well in advance of your first tender submission deadline on ETS
12. Register your organization on ETS well in advance of the important deadlines for your first tender on ETS viz 'Date and Time of Closure of Procurement of Tender Documents' and 'Last Date and Time of Receipt of Bids'. Please note that even after acceptance of your registration by the Service Provider, to respond to a tender you will also require time to complete activities related to your organization, such as creation of -- Marketing Authority (MA) [i.e. a department within the Supplier/ Bidder Organization responsible for responding to tenders], users for one or more such MAs, assigning roles to them, etc. It is mandatory to create at least one MA. This unique feature of creating an MA enhances security and accountability within the Supplier/ Bidder Organization.
13. Get your organization's concerned executives trained on ETS well in advance of your first tender submission deadline on ETS
14. For responding to any particular tender, the tender (i.e. its Tender Search Code or TSC) has to be assigned to an MA. Further, an 'Official Copy of Tender Documents' should be procured/ downloaded before the expiry of Date and Time of Closure of Procurement of Tender Documents. Note: Official copy of Tender Documents is distinct from downloading 'Free Copy of Tender Documents'. Official

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copy of Tender Documents is the equivalent of procuring physical copy of Tender Documents with official receipt in the paper-based manual tendering system.

15. Submit your bids well in advance of tender submission deadline on ETS (There could be last minute problems due to internet timeout, breakdown, et al)
16. It is the responsibility of each bidder to remember and securely store the Pass-Phrase for each Bid-Part submitted by that bidder. In the event of a bidder forgetting the Pass-Phrase before the expiry of deadline for Bid-Submission, facility is provided to the bidder to 'Annul Previous Submission' from the Bid-Submission Overview page and start afresh with new Pass-Phrase(s)
ETS will make your bid available for opening during the Online Public Tender Opening Event (TOE) 'ONLY IF' your 'Status pertaining Overall Bid-Submission' is 'Complete'. For your record, you can generate and save a copy of 'Final Submission Receipt'. This receipt can be generated from 'Bid-Submission Overview Page' only if the 'Status pertaining overall Bid-Submission' is 'Complete'.

3.3.16 Errors and omissions

On any issue or area of material concern respecting e-Procurement/ tendering process not specifically dealt with in these Business Rules, the decision of RailTel shall be final and binding on all concerned.

4 Clarification on RFP Document

- 4.1 A prospective Bidder requiring any clarification on the RFP Document may submit his queries, in writing, through email or by posting RailTel's mailing address and as per schedule indicated in Clause 7 of "**Section I: Invitation to Bidders**". The queries must be submitted in the following format:

BIDDER'S REQUEST FOR CLARIFICATION			
Name and Address of the Organization submitting request		Name and Position of Person submitting request	Contact Details of the Organization / Authorized Representative
			Tel:
			Fax:
			Email:
S. No	RFP Reference(s) (Section, Page)	Content of RFP requiring clarification	Points of clarification required
1			
2			

RailTel will respond, to any request for clarification to queries on the RFP Document, received not later than the date prescribed by RailTel in "**Section I: Invitation to Bidders**", **Clause 8** of this RFP document.

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RailTel's response (including the query but without identifying the source of query) shall also be communicated by e-mail to all prospective bidders without disclosure of the source of the query. Clarifications shall also be posted on RailTel website (<http://www.RailTelindia.com>) and/or <https://www.tcil-india-electronictender.com>).

5 Amendment of RFP Document

- 5.1 At any time prior to the last date for receipt of bids, RailTel, may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the RFP Document by an amendment. It shall not be mandatory for RailTel to disclose the reasons for this change.
- 5.2 The amendment will be notified through website of RailTel(<http://www.RailTelindia.com>) and/or <https://www.tcil-india-electronictender.com>) and would be binding on all Bidders. The amendments would also be notified through e-mail to the Bidders who have purchased RFP document from RailTel's office as mentioned in "**Section I: Invitation to Bidders**".
- 5.3 In order to provide prospective Bidders reasonable time in which to consider the amendment in preparing their bids, RailTel, at its discretion, may extend the last date for the receipt of Bids.

6 Language of Bids

- 6.1 The Bids prepared by the Bidder and all correspondence and documents relating to the bids exchanged by the Bidder and RailTel, shall be written in **English language**, provided that any printed literature furnished by the Bidder may be written in another language so long the same is accompanied by an English translation in which case, for purposes of interpretation of the bid, the **English translation** shall prevail.

7 Documents Comprising the Bids

The bid prepared by the Bidder shall comprise two packets with the following components:

Envelope A

- 7.1 **Technical Bid** - The Technical Bid shall comprise of the following:
 - 7.1.1 Cost of RFP document
 - 7.1.2 Earnest Money Deposit as per clause 6 of section I
 - 7.1.3 Notarized Power of Attorney executed by the Bidder in favour of the duly Authorized Representative, certifying him as an authorized signatory as per **Form 6 in Section IV**
 - 7.1.4 Technical Bid Submission letter as per **Form 4 in Section IV**
 - 7.1.5 Bidder Profile as per **Form 1 in Section IV**
 - 7.1.6 Manufacturer 's Authorization Form as per **Form 5 in Section IV**
 - 7.1.7 Response to Eligibility Criteria and evaluation criteria as per **Form 2.1 & 2.2 in Section IV** along with document proofs
 - 7.1.8 Bidder's experience as per **Form 3 in Section IV**
 - 7.1.9 Documentary evidences of bidders and OEMs experience in form of copy of Purchase Orders
 - 7.1.10 Financial Bid submission letter as per form 12

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7.1.12 Proposed business model and technical solution as per para 18 of this section

Envelope B

7.2 Financial Bid: Form 12 of Section IV

8 Authorized Signatory

8.1 For the purpose of submission of the bid, the Bidder may be represented by either the **Principal Officer** (MD / CEO / Company Secretary) or his duly **Authorized Representative**, in which case he/she shall submit a certificate of authority (Power of Attorney or Board Resolution). All certificates and documents (including any clarifications sought and any subsequent correspondences) received hereby, shall, as far as possible, be furnished and signed by the authorized representative or the Principal Officer.

8.2 It is further clarified that the individual signing the RFP or other documents in connection with the RFP must certify whether he/she signs as:

8.2.1 Constituted attorney of the firm, if it is a company

8.3 Bidders must submit documentary evidence for power-of-attorney along with the technical bid. Bids not accompanied by the power of attorney shall be treated as non-responsive.

9 Earnest Money Deposit (EMD)

9.1 The Bidder shall furnish, as part of its bid, EMD of the amount mentioned in **Clause 6 of “Section I: Invitation to Bidders”**.

9.2 The EMD is required to protect RailTel against the risk of Bidder’s conduct which would warrant the EMD's forfeiture pursuant to **Clause 9.6** of this section.

9.3 The EMD shall be denominated in Indian Rupees, and shall be in the form of a demand draft issued by a **Nationalized / Scheduled Bank** and valid for period as stated in **“Section I: Invitation to Bidders”**.

9.4 Unsuccessful Bidder’s EMD will be discharged / returned after signing of the contract with the successful Bidder. **No interest will be paid by RailTel on the EMD amount.**

9.5 The successful Bidder’s EMD shall be discharged upon the Bidder executing the Contract, pursuant to **Clause 21.3** and after furnishing the Financial bank guarantee, pursuant to **Clause 22**.

9.6 The EMD may be forfeited:

- a. If a Bidder withdraws its bid during the period of bid validity specified in the RFP; or
- b. If the Bidder is found to have submitted false particulars / fake documents; or
- c. If the Bidder is found to have indulged in corrupt practices or manipulation of rates by cartelization; or
- d. in the case of a successful Bidder, if the Bidder fails;
 - i. to sign the Contract in accordance with **Clause 21.3**; or
 - ii. To furnish Financial bank guarantee in accordance with **Clause 22**.

9.7 RailTel requires bidders to observe the highest standard of ethics during the procurement and execution of such contracts.

9.7.1 RailTel will reject a proposal for the award of Contract if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract.

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9.7.2 RailTel will declare a firm ineligible, either indefinitely or for a stated period of time, for awarding a contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, this contract.

9.8 Grafts and commissions etc

9.8.1 Any graft, commission, gift or advantage given, promised or offered by or on behalf of the contractor or his partner, agent, officers, director, employee or servant or any one on his or their behalf in relation to the obtaining or to the execution of this or any other contract with the owner, shall be, in addition to any criminal liability which it may incur, subject of any loss or damage to the owner resulting from any cancellation. The owner shall then be entitled to deduct the amount so payable from any moneys otherwise due to the contractor under the contract.

10 Period of Validity of Bids

10.1 Bids shall remain valid for period as stated in **Clause 7(d) of “Section I: Invitation to Bidders”**. **A bid valid for a shorter period shall be rejected by RailTel as non-responsive and shall not be taken up for evaluation purposes.**

10.2 RailTel may request the Bidder(s) for an extension of the period of validity of the bids. The request and the responses thereto shall be made in writing (or by fax or by e-mail). The validity of EMD shall also be duly extended accordingly. **A bidder granting the request will not be permitted to modify its bid.**

11 Format and Signing of Bid

11.1 The Bidder shall prepare and submit the bid as specified in Clause 1 - Procedure for Submission of Bids of this section.

11.2 Following should be taken care of regarding the RFP document

11.2.1 The quality of document must be good readable flow.

11.3 The bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the Bidder, in which case such corrections shall be initialled by the person or persons signing the bid.

11.4 Prices in any form or by any reason should not be revealed, failing which the offer shall be liable to be rejected.

12 Local Conditions

12.1 It will be incumbent upon each Bidder to fully acquaint himself with the local conditions and factors at the respective locations, sites and offices which would have any effect on the performance of the contract and / or the cost.

12.2 The Bidder is expected to obtain for himself on his own responsibility all information that may be necessary for preparing the bid and entering into contract. Obtaining such information shall be at Bidder's own cost. RailTel shall, however, provide him necessary permissions if the details of the visit schedule are made available in advance.

12.3 Failure to obtain the information necessary for preparing the bid and/or failure to perform activities that may be necessary for project will in no way relieve the successful Bidder from performing any work in accordance with the contract entered into.

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- 12.4 It will be imperative for each Bidder to fully inform themselves of all local and legal conditions and factors which may have any effect on the execution of the contract as described in the RFP documents.
- 12.5 It is the responsibility of the Bidder that such factors have properly been investigated and considered while submitting the bid proposals and that no claim whatsoever including those for financial adjustment to the contract awarded under the bidding documents will be entertained by RailTel and that neither any change in the time schedule of the contract nor any financial adjustments arising thereof shall be permitted by RailTel on account of failure of the Bidder to appraise themselves of local laws and conditions.

13 Sealing and Marking of Bids

- 13.1 The Bidders shall seal and mark the Bid in accordance with **Clause 1 of this section.**

14 Address for Correspondence

- 14.1 The Bidder shall designate the official mailing/e-mail address, place and fax number to which all correspondence shall be sent by RailTel.

15 Contacting RailTel

- 15.1 No Bidder shall contact RailTel on any matter relating to its bid, from the time of the bid opening to the time the Contract is awarded.
- 15.2 Any effort by a Bidder to influence RailTel's bid evaluation, bid comparison or contract award decisions shall result in the rejection of the Bidder's bid.

16 Consortium Related Conditions

Bidding through a Consortium is allowed. Bids submitted by Consortium shall comply with the following:

- 16.1 A maximum of two organizations/ companies shall be allowed to represent a consortium. The bid should clearly identify the lead bidder among the consortium partners. An undertaking from all the consortium partners should be submitted defining the lead bidder and authorizing the authorized signatory from lead bidder to submit the proposal and interact with RailTel for this RFP. Credentials of consortium partners can be used for eligibility criteria and technical parameters
- 16.2 The bid shall be signed by a duly authorized signatory of the lead bidder on behalf of the consortium.
- 16.3 The member-in-charge shall be authorized to incur liabilities and receive instructions for and on behalf of all the members of the Consortium and the entire execution of the contract, including payment.
- 16.4 All the members of the Consortium shall be liable jointly and severally for the performance of the work in accordance with terms laid out in this document and a relevant statement to this effect shall be deemed to be included in the authorization by legally authorized signatory for the member.
- 16.5 All the consortium partners should have positive net worth in each of the last 3 financial years.
- 16.6 None of the consortium partner should be currently blacklisted by any of the PSUs/state or central ministries/Regulatory body/Government bodies and should not be currently under litigation with Indian Railways/ RailTel

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- 16.7 The Consortium should submit a copy of the agreement (as per form 11) entered into by the members governing the performance of the work without limiting in any manner the obligation or joint and several liabilities of the members towards RailTel.
- 16.8 After the submission of bid, Consortium shall not be permitted to restructure (split-up or add) across the bid evaluation period without obtaining No Objection Certificate (NOC) from RailTel. NOC shall be issued when RailTel satisfies itself that the offered change in consortium is not impacting the standing of the original consortium partners (list of consortium members submitted along with the RFP response) against the eligibility and the evaluation criteria mentioned in this RFP or any subsequent corrigendum/addendum issued thereafter for this RFP. However, in any circumstances lead bidder shall not be allowed to be replaced/changed.
- 16.9 In case the successful bidder wishes to restructure (split-up or add) consortium member after the contract has been executed, it shall still have to obtain a No Objection Certificate (NOC) from RailTel. NOC shall be issued when RailTel satisfies itself that the offered change in consortium is not impacting the standing of the original consortium partners (list of consortium members submitted along with the RFP response) against the eligibility and the evaluation criteria mentioned in this RFP or any subsequent corrigendum/addendum issued thereafter for this RFP. However, in any circumstances lead bidder shall not be allowed to be replaced/changed.
- 16.10 If the Consortium bidder fail to satisfy the above conditions their bid will be summarily rejected.

17 Eligibility Criteria

17.1 Eligibility Requirements for the Bidder

S No.	Description	Proof Required
1	The bidder should be a Company registered in India under the Companies Act 1956 or later or a partnership registered under the Indian Partnership Act 1932 or LLP act 2008 or a consortium with their registered office in India as on 31st March 2018.	Copy of valid Certificate of incorporation Registration attested by Company Secretary/ notarised partnership deed or notarised consortium agreement
2	As on date of submission of the proposal, the Bidder shall not be under any declaration of ineligibility for unsatisfactory past performance, corrupt or fraudulent practices, any other unethical business practices or blacklisted either by Central / State Government, PSU, Local or Urban body - Municipalities, Ministry/ Department of Government of India/ State Governments.	Certificate from the Company Secretary/Statutory auditor to the effect that the Bidder is not blacklisted by any of the Central / State Government, PSU, Local or Urban body - Municipalities, Ministry/ Department of Government of India/ State Governments.
3	The bidder should be a Telecom/IT/Wi-Fi Solution Provider with experience of executing 3 or more projects involving Wi-Fi as a component in last 3 years with minimum two Government (Central/State/local), PSUs,	Work Order / LoI and Client letter for satisfactory completion. (PO from parent company to subsidiary company will not

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S No.	Description	Proof Required
	Educational Institutions or reputed company/organization where each installation is having more than 50 access points. At least one of these projects should be public Wi-Fi project with more than 50 Access Points.	be considered, PO from third party to Parent company will be considered)
4	The Bidder or its Parent Company and/or its affiliates shall have minimum annual turnover of INR 200 Crore each during last 3 financial years. The Bidder or its Parent Company and/or its affiliates shall submit the Annual Report/audited accounts certified by Auditor for the above two years to establish the turnover. (i.e. FY 15-16, 16-17 and 17-18)	Copy of Audited Annual reports. For 2017-18, provisional account statement will be considered.
5	The bidder should have positive net worth in each of the last 3 financial years.	Balance Sheet of the financial years 2015-16, 2016-17, 2017-18
6	The bidder should have valid GST registration number.	Copy of certificate

* Credentials of consortium partners as per clause 16 of this section can be used for eligibility criteria and technical parameters

18 Technical Evaluation.

Bidders shall submit a technical proposal containing:

- 1) Overall technical Solution
- 2) Compliance to minimum technical requirements
- 3) Response to Technical Evaluation Criteria
- 4) Approach and methodology to carry out the services
- 5) Detailed process of service delivery
- 6) Business model
- 7) Other formats as mentioned in the RFP document

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Technical Evaluation Criteria

S No.	Description	Proof Required	Marks
A	Past Experience		
1	Annual Turnover of the Bidder or its Parent Company and/or its affiliates in the last 3 financial years (i.e. FY 15-16, 16-17 and 17-18).	Audited financial statements (Balance Sheet, P&L Statement, Notes to account) for the last three financial years. Certificate from Statutory Auditor	Average Annual Turnover in last 3 FYs. Marks INR 200 Cr to 300 Cr – 10 marks Above INR 300 Cr to 400 Cr – 15 marks Above INR 400 Cr – 20 marks
2	Digital advertisement experience - Annual Turnover of the Bidder or its Parent Company and/or its affiliates exclusively from projects related to Digital Advertisements in last 3 financial years (i.e. FY 15-16, 16-17 and 17-18).	Certificate from Statutory Auditor	Average Annual Turnover of last 3 FYs. Marks INR 1 Cr to 5 Cr – 10 marks INR 5 Cr to 10 Cr – 15 marks Above INR 10 Cr – 20 Marks
3	Experience in providing Wi-Fi projects with at least 50 access point per project.	Work Order / LOI / Client letter	< 6 & >=3 Projects – 5 Marks >=6 Projects – 10 Marks
4	ADVERTISERS BASE Number of Unique Advertisers that The Bidder or its Parent Company and/or its affiliates has valid existing relationships.	Copies of Work Orders/Client's certificates/ Certificate(s) from statutory auditor with all relevant details	No. of Advertisers currently associated. Marks 1 to 5 – 10 marks 6 to 10 – 15 marks > 10 – 20 marks
A	Proposed Business Model	Detailed Write-up and presentation at specified date and time	15 Marks
B	Technical Solution	Detailed Write-up and presentation at specified date and time	15 Marks

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18.1 Business and Technical Presentation

RailTel shall invite the bidders for business and technical presentation.

Business Presentation – 1 hours (30 minutes for presentation and 30 minutes for Q&A session). In this, bidder shall be evaluated on following:

1. Understanding of scope of work
2. Approach and Methodology for implementation and operation & maintenance phase
3. Project management (project timelines, risk mitigation plan etc.)
4. High level architecture and solution offered
5. Business case
 - 5.1 Adequacy of assumptions
 - 5.2 Revenue streams and revenue forecast
 - 5.3 Revenue maximization plan
6. Governance model

Technical Presentation – 1 hours (30 minutes for presentation and 30 minutes for Q&A session). In this bidder shall be evaluated on following:

1. Overall solution walk through
2. Compliance to technical and functional requirements as mentioned in RFP
3. Selective functionality walk through
4. Solution capability demonstration.
5. Any salient or proprietary features

Bidders are required to share the Business and Technical presentation in hard copy as well as soft copy on or before scheduled presentation date. The decision on Business and Technical presentation score by RailTel's evaluation committee shall be final.

19 Evaluation of Bids

19.1 Evaluation Methodology

The objective of the evaluation process is to evaluate the bids received in response to this RFP in order to select an effective and best fit solution with highest minimum guaranteed revenue. The evaluation by RailTel will be undertaken by an Internal Committee formed by RailTel. RailTel may consider recommendations made by external experts/ consultants on the evaluation. The decision of the committee formed by RailTel shall be final.

RailTel will scrutinize the offers to determine whether they are complete, whether any errors have been made in the offer, whether required technical documentation has been furnished, whether the documents have been properly signed, and whether items are quoted as per the required format.

RailTel may call for any clarifications/ additional particulars required, if any, on the technical/ commercial bids submitted. The bidder has to submit the clarifications/ additional particulars in writing within the specified date and time. The bidder's offer is liable to be disqualified, if the clarifications/ additional particulars sought are not submitted within the specified date and time.

RailTel reserves the right to call for presentation(s), product walkthrough(s), on the features of the solution offered etc., from the bidders based on the technical bids submitted by them.

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19.2 RailTel will examine the bids in 3 phases.

Phase 1 – Evaluation against Eligibility Criteria

All bids will go through an evaluation against the Eligibility Criteria as mentioned in clause 17 of this section. Only those bidders who meet the Eligibility Criteria would be considered for Phase 2 of the evaluation process.

Phase 2 – Technical Evaluation

Bids, which meet the eligibility criteria (Phase 1 of evaluation), shall be considered for technical evaluation. The technical evaluation of all such bids will be done against the evaluation criteria mentioned in clause 28 of this section. All bidders scoring 60% marks or above shall be considered for financial evaluation (phase 3 of evaluation).

Phase 3 – Financial Evaluation

- 19.3 The entire project cost shall be borne by the bidder, bidder is required to quote the annual minimum guarantee revenue payable to RailTel as per the format below (Annexure-Form13). Revenue generated from the project shall be shared in the ratio of 50:50 or Minimum guarantee quoted, whichever is higher, with RailTel. Bidder may quote the minimum commitment according to their business case and can quote the minimum commitment much higher than the reserved price mentioned below.

Financial Bid (Form – 12)

Station Category	Annual Reserve Price for Minimum Guarantee Amount (for all stations)- excl. of applicable taxes - In INR Cr
B & C	Rs. 8.55 Cr

In case, the number of stations may be increased or decreased by 10% due to reclassification of stations category by Indian Railways or inclusion of stations of any other Railway in the Scope of the work then the minimum guaranteed payment to RailTel will be adjusted proportionally

Two staged financial Evaluation:

Stage -1: Opening of Financial Bid

The financial bid will be opened only of the successful bidders who scored minimum 60% in the Technical Stage (Phase-II). The financial bids shall be opened in the presence of the representatives of the qualified bidders.

Stage-2: Forward E Auction:

1. The bench mark / base price for starting the auction will be based on financial quotation received and evaluated by committee.
2. Date and time of start of FA with the benchmark price will be informed by RailTel on TCIL website.
3. Once the auction process is closed the highest rate received in the auction will be evaluated. RailTel reserved the right not to consider the highest bid received in the auction process.

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4. Technical e-FA training can be opted by the bidder to know the procedure of e-FA (Forward Auction)
5. RailTel may discharge the tender at any stage without assigning any reason.

Post Qualification and Award Criteria

- 19.4 The bidder quoting maximum in the e-Auction will be selected for the project.
- 19.5 In case no increment received in forward auction process, the quote of bidders in financial bid will be considered as the final offer and will be used for further evaluation.
- 19.6 In case, two or more bidders quoted the same price in the financial bid process, then the work will be awarded to the bidder with higher technical score.
- 19.7 Bidders will have to submit project plan with timelines accepted by RailTel as per clause 6 of Section III. In case the bidder is not able to meet the timelines, then RailTel will have the right to terminate the contract and decide on the future course of action for the project.

20 RailTel's Right to Accept Any Bid and to Reject Any or All Bids

- 20.1 RailTel reserves the right to accept any bid, and to annul the Tender process and reject all bids at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for RailTel's action.

21 Notification of Selection

- 21.1 Prior to the expiration of the period of bid validity, pursuant to **Clause 10 of this section**, RailTel will notify the successful Bidders in writing by registered letter/e-mail or by fax that its bid has been accepted. The Bidder shall provide his acceptance within a week of such notification.
- 21.2 The notification of selection will constitute the formation of the Contract. Upon the successful Bidders' furnishing of Financial bank guarantee pursuant to **Clause 22 of this section**, RailTel may notify each unsuccessful Bidder and will discharge their EMD, pursuant to **Clause 9.4 of this section**.

21.3 Signing of Contract

- 21.3.1 The successful bidder/s shall be required to sign the contract with RailTel as per format provided by RailTel within **30 days from date of Letter of Acceptance**.

22 Financial Bank Guarantee - FBG

- 22.1 Within 15 days of the receipt of notification of selection from RailTel, the successful **Bidder shall furnish** the financial bank guarantee as per **Form 7 of "Section IV: Bid Submission Formats and Proforma's"**.

Failure of the successful Bidder to comply with the requirement of **Clause 22.1 or Clause 23.1 of this section** shall constitute sufficient grounds for the annulment of the award and forfeiture of the EMD.

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- 22.2 The successful bidder shall submit a rolling FBG. For Year 1, the successful bidder is expected to maintain an FBG equivalent to half of the minimum commitment quoted for year 1. From Year 2 onwards, the successful bidder is expected to maintain an FBG equivalent to the half of the total revenue payable to RailTel in the last year i.e. in across year 2, the successful bidder is expected to maintain an FBG on half the amount payable to RailTel in year 1. (This shall be over and above the charges to be paid to IR & RailTel towards infrastructure facilities if applicable). The bank guarantee would be valid across contract duration and till 1 years post the completion of the contract
- 22.3 On submitting the new bank guarantee, the previous bank guarantee (already submitted) shall be returned to the successful bidder. The financial bank guarantee may be discharged/ returned by RailTel upon being satisfied that there has been due performance of the obligations of the successful bidder under the contract. However, no interest shall be payable on the financial bank guarantee
- 22.4 The FBG shall remain valid for 12 months beyond contract period in accordance with the Conditions of Contract, in the financial Bank Guarantee format prescribed in this RFP (Form 8)
- 22.5 A live FBG is to be maintained at all times and in case of non-adherence, the last valid FBG will be forfeited
- 22.6 The rolling bank guarantee needs to be renewed 30 days prior to its expiry. The onus is on the successful bidder to submit the renewed FBG at least 15 days before the completion of one year of the current FBG.
- 22.7 The rolling bank guarantee needs to be renewed 30 days prior to its expiry. The onus is on the successful bidder to submit the renewed FBG at least 15 days before the completion of one year of the current FBG.
- 22.8 In case of selected bidder is found in breach of any condition(s) of tender or supply order, at any stage during the course of project, the legal action as per rules/laws, shall be initiated against the bidder and EMD/ FBG shall be forfeited, besides debarring and blacklisting the bidder concerned for at least three years, for further dealings with RailTel
- 22.9 The successful bidder is deemed to have entitled RailTel to encash the bank guarantee and to convert to cash security without any reference to the successful bidder at the risk and cost of the successful bidder.

23 Rejection Criteria

- 23.1 Besides other conditions and terms highlighted **in the RFP document, bids may be rejected** under following circumstances:

23.2 General Rejection Criteria

- 23.2.1 Bids submitted without or improper EMD / cost of RFP document
- 23.2.2 Bids received through Telex / Telegraphic / Fax / e-Mail.
- 23.2.3 If the information provided by the Bidder is found to be incorrect / misleading at any stage / time during the Tendering Process
- 23.2.4 Any effort on the part of a Bidder to influence RailTel's bid evaluation, bid comparison or contract award decisions

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23.2.5 Bids received by RailTel after the last date and time for receipt of bids prescribed by RailTel, pursuant to **Clause 6 -Last Date and time for Submission of Bids of “Section I: Invitation to Bidders”**,

23.2.6 Bids without signature of duly authorized person(s) on all pages of bid documents

23.2.7 Bids without seal of company on whose behalf the signatures have been appended on all pages of the bid document.

23.2.8 Bids without power of authorization and any other document consisting of adequate proof of the ability of the signatory to bind the Bidder

23.3 Technical Rejection Criteria

23.3.1 Technical Bid containing financial details.

23.3.2 Revelation of Prices in any form or by any reason

23.3.3 Failure to furnish all information required by the RFP Document or submission of a bid not substantially responsive to the RFP Document in every respect

24 Court of Jurisdiction

All disputes pertaining both prior and subsequent to the Bidding process shall be subject to the jurisdiction of courts at Delhi only.



Section III

Contract Conditions

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Section III –Contract Conditions

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1 Definitions

- a. "Bidder" shall mean organization submitting the proposal in response to this RFP
- b. "Effective Date" means the date on which this Contract is signed and executed by the parties hereto. If this Contract is executed in parts, then the date on which the last of such Contracts is executed shall be construed to be the Effective Date.
- c. "Goods" means all of the equipment, sub-systems, hardware, software, products accessories and/or other material / items which the Bidder is required to supply, install and maintain under the contract.
- d. "Intellectual Property Rights" means any patent, copyright, trademark, trade name, service marks, brands, proprietary information whether arising before or after the execution of this Contract and the right to ownership and registration of these rights.
- e. "Notice" means:
 - a. notice; or
 - b consent, approval or other communication required to be in writing under this Contract.
- f. "OEM" means the Original Equipment Manufacturer of any equipment / system / software / product which is providing such goods to RailTel under the scope of this Tender / Contract.
- g. "Bidder's Team" means the Bidder who is submitting a proposal against this RFP.
- h. "RailTel" shall mean RailTel, and its successors and assignees.
- i. "Replacement Service Provider" means the organization replacing the bidder in case of contract termination for any reasons
- j. "Sub-Contractor" shall mean the entity named in the contract for any part of the work or any person to whom any part of the contract has been sublet with the consent in writing of RailTel and the heirs, legal representatives, successors and assignees of such person.
- k. "Services" means the work to be performed by the Bidder pursuant to this RFP and to the contract to be signed by the parties in pursuance of any specific assignment awarded by RailTel.

2 Selection Process

- 2.1 Each firm may submit only one bid.
- 2.2 Each bid shall be evaluated against the eligibility criteria.
- 2.3 Each bid meeting the eligibility criteria will be evaluated against technical evaluation criteria and followed by financial bid evaluation.

3 Other terms

- 3.1 All selected Bidders shall have to enter into a written agreement with RailTel for honoring all tender conditions and adherence to all aspects of fair trade practices in executing the project awarded by RailTel.
- 3.2 In the event of a selected Company or the concerned division of the Company is taken over /bought over by another company, all the obligations and execution responsibilities under the agreement with RailTel, shall be passed on for compliance by the new company in the negotiation for their transfer
- 3.3 In case any selected bidder refuses to sign agreement within 30 (thirty) days of communication from RAILTEL, the offer would be treated as withdrawn and the bidder's EMD will be forfeited The defaulting bidder may also be debarred from participating in RailTel tenders for a period of three years.
- 3.4 In case of selected bidder is found in breach of any condition(s) of tender or supply order, at any stage during the course of supply / installation or warranty period, the legal action as per rules/laws, shall be initiated against the bidder and EMD/ FBG shall be forfeited, besides debarring and blacklisting the bidder concerned for at least three years, for further dealings with RailTel

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- 3.5 The bidder should not assign or sublet the contract or any part of it to any other vendor in any form. Any such practices shall result in termination of contract and forfeiture of FBG, RailTel may, at any time, terminate the contract by giving written notice to the selected vendor without any compensation, if the selected vendor becomes bankrupt or otherwise insolvent, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to RailTel.
- 3.6 A tenderer shall submit only one tender in the same tendering process, either individually as a tenderer or as a partner of a Consortium. A Tenderer who submits or participates in more than one bid will cause all the bids in which the Tenderer has participated to be disqualified.

4 Payment terms

- 4.1 Revenue generated from the project shall be shared in the ratio of 50:50 or Minimum guarantee quoted, whichever is higher, after deducting applicable DoT share (if any) with RailTel.
- 4.2 An invoice of difference amount (minimum commitment less amount received through 50:50 revenue sharing) will be raised at the end of financial year and bidder is liable to pay within 90 days. In case of any default in payments, the same will be recovered through the live FBG. In this case, bidder is required to submit fresh FBG as per clause- 22 of Section II.
- 4.3 GST and any other taxes, as applicable, at the time of billing shall be payable over and above the revenue share.
- 4.4 For revenue stream, selected bidder is required to sign a tripartite agreement with every advertisers/Telco's (in case of MDO) and RailTel clearly mentioning the financials involved for advertisement/MDO.
- 4.5 In case of paid wi-fi, the system will be prepaid and the voucher management will be jointly worked out between RailTel and the bidder at the time of launch of service.
- 4.6 All project revenue would be collected by the successful bidder in an escrow account. The escrow shall be set-up in a public sector bank in India. The rules and policies to operate and manage the escrow account would be conveyed to the successful bidder. The revenue collected in the escrow account would be distributed amongst the successful bidder and RailTel as per the schedule agreed in the terms and policies. However, the successful bidder shall prepare a statement of reconciliation for each quarter.

5 Period of Contract

The period of contract shall be for 7 (seven) years in the first instance. It may be extended for a further period on mutual consent. The decision of RailTel will be final in this regard.

6 Default

1. For all kind of defaults, the parent company, if any, will also be responsible for all the contractual obligations under this RFP. ***Indemnity bond from parent company is required to be submitted with the bid.***
2. The successful bidder shall execute the work with due diligence and expedition, keeping to the approved time schedule. In this project occurrence of following would constitute an event of default:
 - 2.1. Should the successful bidder not start the work within 10 business days from the date of LOA
 - 2.2. Should the successful bidder miss the delivery milestones as agreed in the project plan created with the successful bidder/or as per RailTel approved extended timelines by more than 25 percent due to delays solely attributable to successful bidder,
 - 2.3. Should the successful bidder breach the SLAs as defined in section III (clause 7) of this RFP/or as condoned by RailTel for two consecutive quarters in a year on same SLA

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- 2.4. Should the successful bidder fail to make the revenue shares on timelines as defined in this RFP/or as approved by RailTel for one quarter.
3. In the event of occurrence of defaults as mentioned above, RailTel at its own discretion may decide to give another thirty to sixty days' notice in writing to the successful bidder requiring him to make good the neglect or contravention complained of and to bring the project back on its estimated timelines of project plan as approved by RailTel.
- 3.1. In the event of successful bidder failing to rectify its default even after the expiry of above mentioned notice period, it shall be lawful for RailTel to terminate the existing contract with successful bidder and to take the work wholly or in part out of the successful bidder's hands without any further reference and get the work or any part thereof, as the case may be, completed by other agencies without prejudice to any other right or remedy of RailTel.
- 3.2 In the event of successful bidder fails to complete the work, RailTel shall have the right (a) on the completed portion of the work and associated infrastructure, (b) to measure up the whole or part of the work from which the successful bidder has been removed and (c) to get it completed by another Bidder, the manner and method in which such work to be completed, shall be in the entire discretion of RailTel whose decision shall be final; and in both cases (a) and (b) mentioned above the RailTel shall be entitled to forfeit the whole or such portion of the Financial Bank Guarantee as it may consider fit.
4. The work shall be treated as sufficiently completed when the Provisional Acceptance Certificate (PAC) have been issued by RailTel for the work under consideration.

7 Service Level Agreement

- 7.1 The bidders are expected to meet the broad Service Level requirements envisaged for this project. Non-compliance to the SLAs shall result in penalties/deductions as given below:

Service Level	Acceptable Limit	Penalties/deductions on non-compliance	Remarks
Delay in making the wifi Access Point live at stations	Within the time frame as provided by RailTel in this RFP	INR 5,000 per week of delay per station	
Uptime (Hot Spot Availability)	Average uptime in a month 92% or above (during the peak working hours of the station. Peak working hour of each station would be defined separately depending on the footfall at the station)	Average uptime $\geq 88\%$ & $\leq 92\%$ • 0.5% of MSR	
		• Average uptime $\geq 85\%$ & $\leq 87\%$ • 1% of MSR	
		Average uptime $< 85\%$ • 1.5% of MSR	

Note:

- MSR (Monthly Share of Revenue) is the bidder's share of the monthly revenue generated from specified revenue streams (i.e. Quoted percentage of the total monthly revenue)
- These service levels will be further refined / finalized at the time of contract signing.
- The above SLA shall be calculated excluding the downtime due to RailTel's scope.

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- The above Penalties/deductions on non-compliance will be separately invoiced to the bidder and the bidder shall be liable to pay the same by due date of invoice.

8 Sub – Contract

- 8.1 The Bidder shall not, without the consent in writing of RailTel appoint any delegate/ subcontractor for the performance of Services under this contract.

9 Constitution of Consortium

- 9.1 As per clause 16 of Section II

10 Bidder's Obligations

- 10.1 The bidder should support the proposed solution during the contract period.
- 10.2 The bidders should ensure the comprehensive warranty, post-warranty annual maintenance support for all the proposed solution during the contract period.
- 10.3 RailTel reserves the right to review the terms of the Warranty and Annual Maintenance agreements entered into between the Bidder and OEMs and no such agreement/contract shall be executed, amended, modified and/or terminated without the prior written consent of RailTel. An executed copy of each of such agreements/contracts shall, immediately upon execution be submitted by the Bidder to RailTel.
- 10.4 The Bidder shall ensure that none of the components and sub-components is declared end-of-sale or end-of-support by the respective OEM for at least 7 years from the date of work awarded. If, the OEM declares any of the products/ solutions end-of-sale subsequently, the Bidder shall ensure that the same is supported by the respective OEM.
- 10.5 If a product is not supported by the OEM for any reason whatsoever, from the date of Acceptance of the solution till the end of contract, the Bidder should replace the products/ solutions with an alternate that is acceptable to RailTel at no additional cost to RailTel and without causing any performance degradation.
- 10.6 The Bidder shall ensure that the OEMs provide the support and assistance to the Bidder in case of any problems / issues arising due to integration of components supplied by him with any other component(s)/ product(s) under the purview of the overall solution. If the same is not resolved for any reason whatsoever, the Bidder shall replace the required component(s) with an equivalent or better substitute that is acceptable to RailTel without any additional cost to RailTel and without impacting the performance of the solution in any manner whatsoever
- 10.7 The Bidder shall ensure that the OEMs supply and/or install all type of updates, patches, fixes and/or bug fixes for the firmware or software from time to time at no additional cost to RailTel.
- 10.8 The Bidder shall provision the required critical spares/ components at the designated Sites / office locations of RailTel for meeting the uptime commitment of the components supplied by him

11 Statutory Requirements:

- 11.1 During the tenure of this Contract nothing shall be done by the Bidder or his team in contravention of any law, act and/ or rules/regulations, there under or any amendment thereof governing inter-alia customs, stowaways, foreign exchange etc. and shall keep RailTel indemnified in this regard.

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12 RailTel's Obligations

- 12.1 RailTel or his/her nominated representative shall act as the nodal point for implementation of the contract and for issuing necessary instructions, approvals, commissioning, acceptance certificates, payments etc. to the Bidder.
- 12.2 RailTel shall ensure that timely approval is provided to the Bidder as and when required, which may include approval of project plans, implementation methodology, design documents, specifications, or any other document necessary in fulfilment of this contract.
- 12.3 RailTel's representative shall interface with the Bidder, to provide the required information, clarifications, and to resolve any issues as may arise during the execution of the Contract. RailTel shall provide adequate cooperation in providing details, coordinating and obtaining of approvals from various governmental agencies, in cases, where the intervention of RailTel is proper and necessary.

13 Intellectual Property Rights

- 13.1 The Bidder must ensure that while using any hardware, processes, document or material in the course of performing the Services, it does not infringe the Intellectual Property Rights of any person/Company. The Bidder shall keep RailTel indemnified against all costs, expenses and liabilities howsoever, arising out any illegal or unauthorized use (piracy) or in connection with any claim or proceedings relating to any breach or violation of any permission/license terms or infringement of any Intellectual Property Rights by the Bidder or the Bidder's Team during the course of performance of the Services. The Bidder's liability is excluded regarding any claim based on any of the following (a) anything RailTel provides which is incorporated into the Solution; (b) RailTel's modification of the solution; (c) the combination, operation, or use of the solution with other materials, if the third-party claim has been caused by the combination, operation or use of the solution
- 13.2 RailTel shall own and have a right in perpetuity to use all newly created Intellectual Property Rights which have been developed solely during execution of this Contract, including but not limited to all processes, products, specifications, reports and other documents which have been newly created and developed by the Bidder solely during the performance of Services and for the purposes of inter-alia use or sub-license of such Services under this Contract. The Bidder undertakes to disclose all such Intellectual Property Rights arising in performance of the Services to RailTel, execute all such agreements/documents and obtain all permits and approvals that may be necessary in regard to the Intellectual Property Rights of RailTel.
- 13.3 If RailTel desires, the Bidder shall be obliged to ensure that all approvals, registrations, licenses, permits and rights etc. which are inter-alia necessary for use of the goods supplied / installed by the Bidder, the same shall be acquired in the name of RailTel, prior to termination of this Contract and which may be assigned by RailTel to the Prime Bidder for the purpose of execution of any of its obligations under the terms of the Bid, Tender or this Contract. However, subsequent to the term of this Contract, such approvals, registrations, licenses, permits and rights etc. shall endure to the exclusive benefit of RailTel.

14 Taxes

- 14.1 GST and any other taxes, as applicable, at the time of billing shall be payable over and above the revenue share.
- 14.2 The Bidder shall indemnify RailTel against any and all liabilities or claims arising out of this Contract for such taxes including interest and penalty by any such Tax Authority may assess or levy against RailTel/Prime Bidder.

15 Indemnity

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- 15.1 The Bidder shall indemnify RailTel from and against any costs, loss, damages, expense, claims including those from third parties or liabilities of any kind howsoever suffered, arising or incurred inter alia during and after the Contract period out of:
- any negligence or wrongful act or omission by the Bidder or any third party associated with the Bidder in connection with or incidental to this Contract; or
 - any breach of any of the terms of the Bidder's bid as agreed, the RFP and this Contract by the Bidder
 - any infringement of patent, trademark/copyright or industrial design rights arising from the use of the supplied goods and related services or any part thereof
- 15.2 The Bidder shall also indemnify RailTel against any privilege, claim or assertion made by a third party with respect to right or interest in, ownership, mortgage or disposal of any asset, property etc.
- 15.3 Regardless of anything contained (except for the Bidder's liability for bodily injury and/ or damage to tangible and real property for which it is legally liable and its liability for patent and copyright infringement in accordance with the terms of this Agreement) the total liability of the Bidder, is restricted to the total value of the contract and the Bidder is not responsible for any third-party claims.
- 1.1. In an event of a loss/ physical loss/damage to Railway property during the execution of work or during the contract period, successful bidder will be required to get the makegood of that property without any cost implication to Railways/RailTel

16 Dispute Resolution

- 16.1 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.
- 16.2 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.
- 16.3 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. 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.

17 Conflict of interest

- 17.1 The Bidder shall disclose to RailTel in writing, all actual and potential conflicts of interest that exist, arise or may arise (either for the Bidder or the Bidder's Team) in the course of performing the Services as soon as practical after it becomes aware of that conflict.

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18 Publicity

- 18.1 The Bidder / Bidder's Team shall not make or permit to be made a public announcement or media release about any aspect of this Contract unless RailTel first gives the Bidder its written consent.

19 Force Majeure

- 19.1 Force Majeure shall not include any events caused due to acts/ omissions of the Bidder resulting in a breach/ contravention of any of the terms of the Contract and/or the Bidder's Bid. It shall also not include any default on the part of the Bidder due to its negligence or failure to implement the stipulated/ proposed precautions, as were required to be taken under the Contract.
- 19.2 The failure or occurrence of a delay in performance of any of the obligations of either party shall constitute a Force Majeure event only where such failure or delay could not have reasonably been foreseen i.e. war, or hostility, acts of the public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restriction, strikes, lockouts or act of God (hereinafter referred to as events) , or where despite the presence of adequate and stipulated safeguards the failure to perform obligations has occurred at any location in scope. In such an event, the affected party shall inform the other party in writing within five days of the occurrence of such event. Any failure or lapse on the part of the Bidder in performing any obligation as is necessary and proper, to negate the damage due to projected force majeure events or to mitigate the damage that may be caused due to the above-mentioned events or the failure to provide adequate disaster management/ recovery or any failure in setting up a contingency mechanism would not constitute force majeure, as set out above.
- 19.3 In case of a Force Majeure, all Parties will endeavour to agree on an alternate mode of performance in order to ensure the continuity of service and implementation of the obligations of a party under the Contract and to minimize any adverse consequences of Force Majeure.

20 Limitation of Liability

- 20.1 Provided the following does not exclude or limit any liabilities of either party in ways not permitted by applicable law:
- a) The Supplier shall not be liable to RailTel, 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 RailTel; and
 - b) the aggregate liability of the Supplier to RailTel, 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 RailTel with respect to intellectual property rights infringement.

21 Insurance

- 21.1 The Goods supplied under this Contract shall be fully insured by the Bidder at his own cost, against any loss or damage, till the Acceptance of the System. The Bidder shall submit to RailTel, documentary evidence issued by the insurance company, indicating that such insurance has been taken.
- 21.2 The Bidder shall bear all the statutory levies like customs, insurance, freight, etc. applicable on the goods and also the charges like transportation charges, octroi, etc. that may be applicable till the goods are delivered at the respective site of installation shall also be borne by the Bidder.

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22 Corrupt Practices

- 22.1 The contractor shall not offer or give or agree to give to any person in the employment of RailTel or working under the orders of RailTel any gift or consideration of any kind as an inducement or reward for doing on for bearing to do or for having done or forborne to do any act in relation to the obtaining execution of the contract or any other contract with RailTel or for showing any favour or for bearing to show disfavour to any person in relation to the contract or any other contract with RailTel. Any breach of the aforesaid condition by the contractor or any one employed by him or acting on his behalf (whether with or without the Knowledge of the contractor) or the commission of any offence by the contractor or by any one employed by him or acting on his behalf under Chapter IX of the Indian Penal Code, 1860 or the Prevention of Corruption Act, 1947 or any other Act enacted for the prevention of corruption by public servants shall entitle RailTel to cancel the contract and all or any other contracts with the contractor and to recover from the contractor the amount of any loss arising from such cancellation in accordance with the provisions of this contract.
- 22.2 Any dispute or difference in respect of either the interpretation effect or application of the above condition or of the amount recoverable there under by RailTel from the contractor, shall be decided by RailTel, whose decision thereon shall be final and binding on the contractor.

23 Insolvency and Breach of Contract

- 23.1 RailTel may at any time, by notice in writing summarily determine the contract without compensation to the Contractor in any of the following events, that is to say:
- a. If the Contractor being an individual or if a firm, any partner thereof, shall at any time, be adjudged insolvent or shall have a receiving order or order for administration of his estate made against him or shall take any proceeding for composition under any Insolvency Act for the time being in force or make any conveyance or assignment of his effects or enter into any assignment or composition with his creditors or suspend payment or if the firm be dissolved under the Partnership Act, or
 - b. If the Contractor being a company is wound up voluntarily or by the order of a Court or a Receiver, Liquidator or Manager on behalf of the Debenture-holders is appointed or circumstances shall have arisen which entitle the Court or Debenture holders to appoint a Receiver, Liquidator or Manager, or
 - c. If the Contractor commits any breach of the contract not herein specifically provided for. Provided always that such determination shall not prejudice any right of action or remedy which shall have accrued or shall accrue thereafter to RailTel and provided also the Contractor shall be liable to pay to RailTel for any extra expenditure he is thereby put to and Contractor shall, under no circumstances, be entitled to any given-on re-purchase.

24 Laws governing the Contract

- 24.1 This contract shall be governed by the Laws of India for the time being in force.
- 24.2 Irrespective of the place of delivery, the place of performance or place of payment under the contract, the contract shall be deemed to have been made at the place from which the acceptance of tender has been issued.
- 24.3 Jurisdiction of courts- This Courts of the place from where the acceptance of tender has been issued shall alone have jurisdiction to decide any dispute arising out of or in respect of the contract.
- 24.4 **Compliance with provisions of Contract Labour (Regulation and Abolition) Act, 1970:**
- 1) The Contractor shall comply with the provisions of the Contract Labour (Regulation and Abolition) Act, 1970 and the Contractor Labour (Regulation and Abolition) Central Rules, 1971, as modified from time-to-time, wherever applicable and shall also indemnify RailTel from and against any claims under the aforesaid Act and the Rules.

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2) The Contractor shall obtain a valid license under the aforesaid Act as modified from time-to-time before the commencement of the contract and continue to have a valid license until the completion of the contract. Any failure to fulfil this requirement shall attract the penal provisions of the contract arising out of the resultant non-execution of the contract.

3) The Contractor shall pay to labour employed by him directly or through Sub-Contractors the wages as per provisions of the aforesaid Act and the Rules wherever applicable. The Contractor shall, notwithstanding the provisions of the contract to the contrary, cause to be paid the wages to labour indirectly engaged on the contract including any engaged by his Sub-Contractors in connection with the said contract, as if the labour had been immediately employed by him.

4) In respect of all labour directly or indirectly employed in the contract for performance of the Contractor's part of the contract, the Contractor shall comply with or cause to be complied with the provisions of the aforesaid Act and the Rules wherever applicable.

5) In every case in which, by virtue of the provisions of the aforesaid Act or the Rules, the RailTel is obliged to pay any amount of wages to a workman employed by the Contractor or his Sub-Contractor in execution of the contract or to incur any expenditure in providing welfare and health amenities required to be provided under the aforesaid Act and the Rules or to incur any expenditure on account of the contingent liability of RailTel due to the Contractor's failure to fulfil his statutory obligations under the aforesaid Act or the Rules RailTel will recover from the Contractor, the amount of wages so paid or the amount of expenditure so incurred, and without prejudice to the rights of RailTel under Section 20, Sub-section (2) and Section 21, Sub-section (4) of the aforesaid Act, RailTel shall be at liberty to recover such amount or part thereof by deducting it from the security deposit and/or from any sum due by RailTel to the Contractor whether under the contract or otherwise. RailTel shall not be bound to contest any claim made against it under Sub-section (i) of Section 20 and Sub-section (4) of Section 21 of the aforesaid Act except on the written request of the Contractor and upon his giving to RailTel full security for all costs for which RailTel might become liable in contesting such claim. The decision of RailTel regarding the amount actually recoverable from the Contractor as stated above, shall be final and binding on the Contractor.

25 Implementation Schedule:

Delivery Schedule - Wi-Fi services at 302 Cat-B & 363 Cat-C Railway Stations									
Project Phase /weeks	Responsibility	Date / Date From	Date to	M1	M2	M3	M4	M5	M6
		T is the date of Letter of Acceptance							
Implementation of Wi-Fi services at 20 % of allocated Railway Station	Bidder		T+ 45 days						
Implementation of Wi-Fi services at 50 % of allocated Railway Station	Bidder		T+ 90 days						
Implementation of Wi-Fi services at 75 % of allocated Railway Station	Bidder		T+ 135 days						
Implementation of Wi-Fi services at 100 % of allocated Railway Station	Bidder		T+ 180 days						

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Section IV

Bid Submission Formats and Proforma

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Section IV – Bid Submission Formats and Proforma

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1 Bidder Profile**Form 1 – Bidder Profile**

S. No.	Particulars	Description/Details	Reference Documents	Page No.
A.	Name of Bidder		-	-
B.	Contact Details		-	-
	Address			
	Telephone No.			
	Fax			
	Email			
	Website			
C.	Incorporation Details		Certified copy of incorporation under Indian Companies Act, 1956	
	Incorporation Number			
	Date of Incorporation			
	Authority			
D.	GST Regn Details		Certified copy of valid GST Registration in India	
	GST No.			
	Date			
	Registration Authority			
E.	Legal Status of Company			
F.	Name of Authorized Signatory		Special Power of Attorney, duly authorizing the person signing the bid documents to sign on behalf of the bidder and thereby binding the bidder	
	Position			
	Telephone			
	Fax			
	Mobile			
	Email			
J	Number & Address of Offices			
	a) In India			

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S. No.	Particulars	Description/ Details	Reference Documents	Page No.
	b) Outside India			
Full Name and Signature of the Authorized Representative:				

Bidder:

Signature -----

Name -----

Designation -----

Company -----

Date -----

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2 Response to Eligibility and Evaluation Criteria**Form 2.1 – Response to Eligibility Criteria**

S No.	Description	Proof Required	Response	Reference in Bid
1	The bidder should be a Company registered in India under the Companies Act 1956 or later or a partnership registered under the Indian Partnership Act 1932 or LLP act 2008 with their registered office in India as on 31st March 2018.	Copy of valid Certificate of incorporation Registration attested by Company Secretary/ Authorized Signatory		
2	As on date of submission of the proposal, the Bidder shall not be under any declaration of ineligibility for unsatisfactory past performance, corrupt or fraudulent practices, any other unethical business practices or blacklisted either by Central / State Government, PSU, Local or Urban body - Municipalities, Ministry/ Department of Government of India/ State Governments.	Certificate from the Company Secretary to the effect that the Bidder is not blacklisted by any of the Central / State Government, PSU, Local or Urban body - Municipalities, Ministry/ Department of Government of India/ State Governments.		
3	The bidder should be a Telecom, IT or Wi-Fi Solution Provider with experience of executing 3 or more projects involving Wi-Fi as a component in last 3 years with minimum two Government (Central/State/local), PSUs, Educational Institutions or reputed company/organization where each installation is having more than 50 access points. Atleast one of these projects should be public wifi project	Work Order / LOI / Client letter		

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S No.	Description	Proof Required	Response	Reference in Bid
	with more than 50 Access Points.			
4	The bidder should have minimum cumulative turnover of Rs200 Crores during last three financial years and must submit audited balance sheet of the company for last three financial years.	Copy of Audited Annual reports		
5	The bidder should have positive net worth in each of the last 3 financial years.	Balance Sheet of the financial years 2015-16, 2016-17, 2017-18		
6	The bidder should have a GST registration number in India	Duly signed & stamped copies of relevant certificates of registration		

Bidder:

Signature -----
Name -----
Designation -----
Company -----
Date -----

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Form 2.2 – Response to Evaluation Criteria

S No.	Description	Proof Required	Response	Reference in Bid
A	Past Experience			
1	Annual Turnover of the Bidder or its Parent Company and/or its affiliates in the last 3 financial years (i.e. FY 15-16, 16-17 and 17-18).	Audited financial statements (Balance Sheet, P&L Statement, Notes to account) for the last three financial years.		
2	Digital advertisement experience - Annual Turnover of the Bidder or its Parent Company and/or its affiliates exclusively from projects related to Digital Advertisements in last 3 financial years (i.e. FY 15-16, 16-17 and 17-18).	Audited balance sheet indicating revenue from advertisement or Certificate from Statutory Auditor		
3	Experience in providing Public Wi-Fi projects	Work Order / LOI / Client letter		
4	ADVERTISERS BASE Number of Unique Advertisers that The Bidder or its Parent Company and/or its affiliates has existing relationships with.	Copies of Work Orders/Client's certificates/ Certificate(s) from statutory auditor with all relevant details		
B	Proposed Business Model	Detailed Write-up and presentation at specified date and time		
C	Technical Solution	Detailed Write-up and presentation at specified date and time		

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3 Bidder's Experience

Form 3.1 –List of Projects

Assignment name:	Country:
Installation Location Details:	
Name of Client:	Assignment Value: No of Access Points:
Address:	Start Date (Month/Year): Completion Date (Month/Year):
Narrative Description of Project:	
Description of Actual Services Provided:	

For each of the project listed above the bidder needs to provide documentary evidence (Copy of Work Order and Completion Certificate)

Bidder:

Signature -----

Name -----

Designation -----

Company -----

Date -----

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4 Bid Submission Letter

Form 4 –Bid Submission Letter

To

ED/EB

RailTel Corporation of India Ltd.
Plot No. 143, Institutional Area,
Opposite-Gold Souk,
Sector-44, Gurgaon-122003

Sir,

Sub: Response to Request for Proposal ('RFP') for Selection of Managed Service Providers for Wi-Fi at Railway Stations

Ref: RFP No Tender Number:

1. I/We _____ have read the various conditions detailed in tender documents attached here to and hereby agree to ABIDE BY THE SAID CONDITIONS.
2. I/We also agree to keep this offer open for acceptance for a period of 180 days from the date of submission and in default thereof.
3. I/We will be liable for forfeiture of my/our Earnest Money.
4. I/We agree to offer the best prices for the offered products to RailTel and / or its appointed and prospective implementing agencies during various RFPs and RFQs etc.
5. We confirm having submitted the information as required by you as Qualification Criteria. In case you require any other further information / documentary proof in this regard before evaluation of our bid, we agree to furnish the same in time to your satisfaction.
6. 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 RailTel.
7. I/We have not taken any deviations in the Scope of work, Terms and Conditions, and Technical Specifications as mentioned in the RFP. Further, we confirm that we have not mentioned any additional conditions, assumptions and if any, found in the Proposal documents shall not be given effect to.
8. A sum of Rs (As per Bid data sheet) as an Account Payee Demand Draft in favour of RailTel Corporation India Ltd. No. _____ dated _____ issued by _____ is herewith forwarded as "Earnest Money". The full value of the 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 (Financial bank guarantee) within 15 days after issue of notification of award/empanelment
9. We hereby declare that in case we are selected to be selected with RailTel, we shall submit the contract Financial bank guarantee in the form prescribed in the RFP.
10. We hereby declare that our bid is made in good faith, without collusion or fraud. All the information and statements made in this Proposal are true and accept that any misinterpretation contained in it may lead to our disqualification
11. We understand that our bid is binding on us and that you are not bound to accept any Bid you receive.

Thanking you,

Yours faithfully,

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(Signature of the Bidder)

Printed Name

Designation

Seal

Date:

Place:

Business Address:

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5 Manufacturer's Authorization Form

Form 5 – Manufacturer's Authorization Form Manufacturer's Authorization

(To be obtained from the OEM on OEM letterhead)

RFP No.:

Date: _____

To

ED/EB

RailTel Corporation of India Ltd.
Plot No. 143, Institutional Area,
Opposite-Gold Souk,
Sector-44, Gurgaon-122003

WHEREAS _____ who are official
manufacturers of _____ having factories at
_____ do hereby authorize
_____ to submit a Bid in relation to the
Invitation for Bids indicated above, the purpose of which is to provide the following Goods,
manufactured by us _____ and to subsequently negotiate and sign the
Contract.

We hereby extend our full guarantee and warranty, with respect to the Goods offered by the above firm
in reply to this Invitation for Bids. We also confirm that the Goods/Services proposed as a part of the
RFP shall not be End of Sale / Life / Support for at least 7 years from the date of bid submission. The
products offered by us are of equivalent or higher specifications as mentioned in the RFP.

Signature: _____

Full Name: _____

Address: _____

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6 Notarized Power of Attorney

Form 6 - Notarized Power of Attorney

(To be signed by any of Board Directors or Company Secretary)

(To be accompanied along with requisite copy of the board resolution)

I _____ certify that I am _____ of the Company under the laws of _____ and that _____ who signed the above tender is authorized to bind the Company / Firm by authority of its governing body.

Signature: _____

Full Name: _____

Address: _____

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7 Financial Bank Guarantee for Contract Performance

7.1 Form 7 – Financial Bank Guarantee Format

(To be stamped in accordance with stamp act)

(To be used by approved Indian scheduled commercial banks)

1. In consideration of the RailTel Corporation of India Ltd, Corporate Office, Plot No. 143, Sector 44, Gurgaon, Haryana -122003 (Hereinafter called “RailTel”) having agreed to exempt (hereinafter called “the said Contractor(s)”) from the demand, under the terms and conditions of an Agreement No. dated made between and For (hereinafter called “the said Agreement”) of total cost of ownership for the due fulfilment by the said contractor(s) of the terms and conditions contained in the said Agreement, or 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 amount 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) / Supplier(s) in any suit or proceedings pending before any court or Tribunal relating thereto our liability under this present being, absolute and unequivocal.

4. The payment so made by us under this Bond shall be a valid discharge of our liability for payment thereunder and the Contractor(s) / Supplier(s) shall have no claim against us for making such payment.

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5. 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 (1) We shall be discharged from all liability under this Guarantee thereafter.

6. 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 exercisable by the RailTel against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension to the said Contractor(s) or for any forbearance, act or omission on the part of RailTel or any indulgence by the RailTel to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

5. This Guarantee will not be discharged due to the change in the Constitution of the Bank or the Contractor(s) Supplier(s).

6. We, (indicate the name of Bank) lastly undertake not to revoke this Guarantee during its currency except with the previous consent of the RailTel in writing.

Dated the day of 2017

for

(indicate the name of the Bank)

Witness

1. Signature

Name

2. Signature

Name

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8 Pre-bid Query Format**Form 8– Pre-bid Query Format**

BIDDER'S REQUEST FOR CLARIFICATION			
Name and Address of the Organization submitting request		Name and Position of Person submitting request	Contact Details of the Organization / Authorized Representative
			Tel:
			Fax:
			Email:
S. No	RFP Reference(s) (Section, Page)	Content of RFP requiring clarification	Points of clarification required
1			
2			

Bidder:**Signature** -----**Name** -----**Designation** -----**Company** -----**Date** -----

*To be submitted by email/ hardcopy

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9 Checklist for RFP response**Form 9 - Technical Response Checklist**

Sr No	Checklist	Included (Yes / No)	Reference in the bid (Section, Page)
1	Cost of RFP document		
2	Earnest Money Deposit in the form of DD as per clause 6 of section I		
3	Notarized Power of Attorney executed by the Bidder in favour of the duly Authorized Representative, certifying him as an authorized signatory as per form 6		
4	Technical Bid Submission letter as per form 4		
5	Bidder Profile as per form 1		
6	Manufacturer 's Authorization Form as per form 5		
7	Response to Eligibility Criteria and evaluation criteria as per forms 2.1 & 2.2 and documentary proofs		
8	Bidder's experience as per form 3		
9	Proposed Business Model		
10	Technical Solution		
11	Documentary evidences of bidder's experience in form of copy of Work Order and Completion Certificate		
12	Financial Bid submission letter as per form 10		
13	Consortium agreement, if applicable, as per form 11		

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10 Financial Proposal Format

Form 10 – Financial bid submission Letter

To

ED/EB

RailTel Corporation of India Ltd.
Plot No. 143, Institutional Area,
Opposite-Gold Souk,
Sector-44, Gurgaon-122003

Sir,

Sub: Response to Request for Proposal ('RFP') for Selection of Managed WiFi service provider at Category B and C Railway Stations

Ref: Tender No. _____ dated _____

We, the undersigned Bidders, having read and examined in detail all the RFP/ bidding documents in respect of do hereby propose to provide services as specified in the RFP document number _____ **dated** _____.

1. PRICE AND VALIDITY

The price mentioned in our bid is in accordance with the terms as specified in the RFP documents. This bid is valid for a period of 180 calendar days from the date of opening of the technical bids.

2. We have studied the relevant clause(s) in Indian Tax Laws and hereby declare that any taxes, surcharge towards Professional and any other corporate Tax applicable under the laws, we shall pay the same.

3. BID PRICING

We further confirm that the price stated in our bid is in accordance with the RFP documents.

4. QUALIFYING DATA

We confirm having submitted the information as required by you as per the RFP documents. In case you require any other further information/documentary proof in this regard before evaluation of our bid, we agree to furnish the same in time to your satisfaction.

5. BID PRICE

This price is attached with our bid as part of the bid.

6. CONTRACT FINANCIAL BANK GUARANTEE

We hereby declare that in case the contract is awarded to us, we shall submit the contract Financial bank guarantee in the form prescribed in the RFP within 15 days of issue of LOI.

7. We hereby declare that our bid is made in good faith, without collusion or fraud and the information contained in the bid is true and correct to the best of our knowledge and belief.

8. We understand that our bid is binding on us DURING THE VALIDITY PERIOD OR THE EXTENSIONS THEREOF and that you are not bound to accept our Bid.

Tender no. - *RailTel/Tender/OT/CO/Mktg/2018-19/Station Wi-Fi/441*

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Thanking you,

Yours faithfully,

(Signature of the Bidder)

Printed Name

Designation

Seal:

Date:

Place:

Business Address:

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11 Form-11: Consortium Agreement

Consortium Agreement

Between

<Party 2>

And

<Lead Bidder>

Definitions

1. Business Associate: Associates that may be decided upon by < Lead Bidder> at its sole discretion with the objective of completing and/or covering all aspects of the scope of work. < Lead Bidder> will keep Parties informed of such names of Business Associates and the terms of appointment therefor with a view to maintain transparency amongst the parties hereto.
2. Consortium: Consortium between < Lead Bidder>, <Party2>
3. Consortium Agreement: Agreement/Memorandum of Agreement/Understanding between parties
4. Customer: <Insert Customer Name> ("Customer" or <Insert abbreviation>)
5. Definitive Agreement: Contract between parties, in case Consortium is awarded the work by the customer
6. Effective Date: The last date of signature of this Consortium Agreement by parties' Authorized Signatories
7. Lead Bidder/Lead Member: < Lead Bidder>
8. Participant Member(s): <Party2>
9. Party/ Parties: < Lead Bidder>, <Party2> are hereinafter collectively referred to as the "Parties" and individually as a "Party".
10. RFP: Request for Proposal ("RFP") for <RFP Name>, <RFP Reference Number>, dated <Insert RFP Date> for <insert brief summary of scope>
11. RFP Response: Proposal submitted to customer in response to RFP received for Project<Insert project name>, < Lead Bidder> will be the Lead Bidder
12. Work: Project <Insert Project Name> awarded by customer to successful bidder
13. Scope: The Parties have, on the basis of this Consortium Agreement, agreed to cooperate with each other for the purpose of the RFP for part of the products and services to be provided by Parties as per Exhibit-A. Unless otherwise agreed by the parties in writing, each party shall bear its own costs and expenditures incurred in

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connection with the preparation, submission and negotiation of the RFP Response. Unless otherwise agreed in writing, the Parties intend for < Lead Bidder> to be the Lead Bidder, and <Party 2> to be the Participant Members, with respect to the project pursuant to the RFP. If the Consortium is selected based on the RFP Response, the Parties in line with the terms of this Consortium Agreement will execute the project.

14. All contacts with Customer pertaining to the RFP and RFP Response shall be coordinated through Lead Bidder except contacts initiated by the Participant Member itself. Parties agree to promptly notify each other, if it is directly contacted by Customer concerning the RFP, RFP Response or any related matter.
15. Participant Members to the extent requested and commercially reasonable will be available for consultation with < Lead Bidder> during any negotiations with Customer. Participant Members will, upon < Lead Bidder>'s reasonable request attends any negotiations with Customer, which pertain to the RFP Response and the offerings of Consortium in Exhibit A. < Lead Bidder> will consult with Participant Members on all relevant matters concerning Participant Members' scope of work and responsibilities in Exhibit A.
16. The division of roles and responsibilities of the Parties for the purposes of the RFP Response shall be mutually agreed between the parties as per Exhibit A to this Consortium Agreement.
17. The Members of the Consortium undertake to specify their respective roles and responsibilities (as per Exhibit A of this agreement) for the purposes of implementation of this Consortium Agreement and the said project if awarded to the Consortium
18. In case to meet the requirements of bid documents or any other stipulations of < Lead Bidder>, it becomes necessary to execute and record any other documents amongst the members of the Consortium, they undertake to do the needful and to participate in the same for the purpose of the said project.
19. In case of any discrepancy or ambiguity in any clause/specification pertaining to scope of work area, the RFP released by Customer (Request for Proposal ("RFP") for <RFP Name>, <RFP Reference Number>, dated <Insert RFP Date> for <insert brief summary of scope>) shall supersede and will be considered sacrosanct.

20. Cooperation between Business Associates

The Parties acknowledge the importance of cooperation between Participant Members and < Lead Bidder> for the <Insert Project Name> and, both during preparation of RFP Response as well as during the life of the "Definitive Agreement" in case work is awarded to Consortium, agree to cooperate with each other in order to ensure smooth implementation and integration of the Scope of Work defined in the RFP with the Scope of Work allocated to Consortium. Failure to do so will result in termination of the Consortium Agreement or Definitive Agreement, whatever is in place between Participant Members and < Lead Bidder>, at the said time.

21. Joint and Several Liability : <Party 2 > shall be jointly and severally liable to < Lead Bidder> for the execution of the entire project in accordance with its terms as given in this Consortium Agreement, in case Consortium is successful bidder and work is awarded to < Lead Bidder> on behalf of the Consortium. In case of Non-performance of scope of work as defined in Exhibit A by either/both parties and/or Non-compliance of any clause given in this Consortium Agreement by either/both parties, both parties will be jointly and severally liable.
22. Term: This MOU shall be effective from the "Effective Date" and shall continue till determination of successful bidder by the customer. In case < Lead Bidder> is awarded the work by the customer, <Party 2> shall have to

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unconditionally enter into a “Definitive Agreement” with < Lead Bidder> that shall constitute of similar terms and conditioned as mentioned in this MoU or on such further terms as may be required to be included at the time of acceptance of the bid by the customer. The Definitive Agreement, shall supersede this MoU across the contract period between the Customer and < Lead Bidder>.

23. Obligations of Parties: Parties shall be responsible for their inputs in the RFP Response and warrant that they are qualified under law to perform the obligations under the RFP Response.
24. <Party 2> will be jointly and severally liable for all clauses given in this Consortium Agreement
25. OEMs finalized by the Consortium for this project will have to give authorization for delivered/offered goods/services to < Lead Bidder> directly.
26. <Party 2> must disclose list of OEMs finalized for the scope of work. If either Party wishes to make any change in list of OEMs post award of work to < Lead Bidder>, must be finalized basis mutual agreement between the Parties.
27. Confidentiality: Parties agree that they may, in the course of their business relationship with the other, acquire or be exposed to information that is proprietary or confidential to the other party, its affiliates or its or their respective clients. Both parties undertake to hold all such information in confidence and not to disclose such information for any purpose whatsoever save as may be strictly necessary for the performance of this assignment as mentioned in this MOU. The term “Confidential Information” as used herein includes (A) the deliverables and (B) any information or documents disclosed by one party to the other party (a) orally, and which reduced to writing within in period of 30 days of the disclosure; and/or (b) in writing or including but not limited to any written or printed documents, samples, models, technical data/know how, drawings, photographs, specifications, standards, manuals, reports, formulae, algorithms, processes, information, lists, trade secrets, computer programs, computer software, computer database, computer software documentation, quotations and price lists, research products, inventions, developments, process, engineering techniques, strategies, customers, internal procedures, employees and business opportunity. Such confidential information may be used by the receiving party only with respect to the performance of its obligations under this MOU and only by those employees of the receiving party and its subcontractors who have a need to know such information for the purposes related to this MOU, provided that such subcontractors have signed separate MOUs containing substantially similar confidentiality provisions. The receiving party shall protect the Confidential Information of the disclosing party by using the same degree of care (but not less than a reasonable degree of care) to prevent the unauthorized use, dissemination or publication of such Confidential Information, as the receiving party uses to protect its own confidential information of like nature. The confidentiality obligations contained herein shall not apply to any (i) information which is or subsequently becomes available in public domain or (ii) information which becomes lawfully known or available to receiving party from a source other than the disclosing party; (iii) information which is already known to the receiving party independently of the disclosing party, & without an obligation to maintain confidentiality; (iv) information which is independently developed by the receiving party without the use of confidential information; (v) information which is required to be disclosed by the receiving party under the compulsion of law, or by order of any court or Government or regulatory body to whose supervisory authority the receiving party is subject; provided that, in any such event, the receiving party shall give the disclosing party a notice in writing as soon as practicable (which shall be prior notice where possible and not later than 30 days after the disclosure) and the receiving party shall use its best effort to obtain assurance that the disclosed information will be accorded

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confidential treatment. The confidentiality provisions of this MOU shall survive the term and termination of this MOU for a period of two (2) years.

28. Cost: Each Party shall individually assume their own respective costs associated with the activities undertaken pursuant to this MoU. No third party cost shall be committed and incurred until both parties approve and agree on such expenditure.
29. Indemnity: All the Parties shall indemnify, defend and hold each other harmless from and against any losses, costs, expenses, damages of whatsoever nature which may be incurred or suffered by either of the Party which arises out of or as a result from any breach of contract, warranty, tort (including negligence) or otherwise of either of the Party's obligation or agreement contained herein.
30. Entire MOU: This MOU constitutes the entire understanding between the Parties relating to the matters discussed herein and supersedes any and all prior oral discussions and/or written correspondence or understanding between the parties.
31. Exclusivity: This Consortium Agreement binds that either party is anytime precluded from having similar arrangements with a third person/party for similar scope of work of Consortium, for the entire duration of this project. Parties shall also maintain the confidentiality provisions of this Consortium Agreement which will be governed by the NDA signed between < Lead Bidder> and <Party 2>, <Party3>, <Party4> and <Party 5>
32. However, < Lead Bidder> is free to associate and enter into Consortium Agreement / Agreement with other parties in relation to other work not covering in this scope of work in connection with RFP of <Insert RFP Name>
33. The Consortium Agreement binds both, <Party 2>, from entering into similar arrangements with a third person/party.
34. Amendment: This Consortium Agreement may be amended or modified only with the mutual written consent of the Parties.
35. That if any change in the membership of the Consortium be required to be made by the members of the Consortium, the same shall be done with the consent of < Lead Bidder> subject to the conditions as may be stipulated by them in this regard.
36. General: Except to the extent otherwise provided herein, no liability shall result to any party from delay in performance or from non-performance caused by circumstances beyond the reasonable control of that party affected, including but not limited to act of God, fire, flood, explosion, war, action or request of the Governmental authority, accident, labor trouble, but each of the hereto shall be diligent in attempting to remove such cause or causes.
37. In all matters relating to this Consortium Agreement, each Party shall be acting as an independent contractor. Neither Party's employees are employees of the other party under the meaning or application of any laws or otherwise. Each Party assumes all liabilities or obligations imposed by any law with respect to its employees. Neither Party shall have any authority to assume or create any obligation, express or implied, on behalf of the other party without the prior written consent of that other Party. Neither Party shall have authority to represent itself as an agent, employee, or in any other capacity of the other Party.

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38. All notices, under this Consortium Agreement shall be given by the parties at the addresses given on page 1 of this Consortium Agreement in writing by letter or fax. In case of notice to any Participant Member, a copy of such notice shall be marked to all Consortium Members
39. Neither party shall be entitled to assign or sub-contract all or any of its rights, benefits and obligations under this Consortium Agreement without the prior written consent of the other party, which consent shall not be unreasonably withheld or delayed.
40. Notwithstanding any other provisions of this Consortium Agreement, the provisions of this Consortium Agreement that are intended to survive shall so survive the term and termination of this Consortium Agreement.
41. The waiver of any breach of any term, covenant, or condition, herein contained, shall not be deemed to be a waiver of such term, covenant or condition, or any subsequent breach of the same.
42. If any part, term or provision of this Consortium Agreement shall be held void, illegal unenforceable, or in conflict with any law of any central, state, or local Government having jurisdiction over this Consortium Agreement, or its subject matter, the validity of the remaining portions or provisions shall not be affected thereby and if the invalid portion is such that the remainder controlled be sustained without it, all parties shall enter in discussions to find a suitable replacement to the clause that shall be legally valid.
43. Parties shall not publicize any information pertaining to this Consortium Agreement or to the other party without seeking the prior written consent of the other party.
44. Nothing contained in this Consortium Agreement shall be construed as creating a joint venture, partnership or employment relationship between the parties hereto, nor shall either party have the right, power or authority to create any obligation or duty, express or implied, on behalf of the other.
45. The Consortium Agreement together with any Schedules, Annexure and Exhibits attached hereto and executed by the parties hereto constitutes the entire understanding between the parties hereto with respect to the subject matter hereto and supersedes and cancels all previous agreements thereof.
46. This Consortium Agreement may be executed by the parties in separate counterparts each of which when so executed and delivered shall constitute an original, and all such counterparts together shall constitute one and the same instrument.
47. This Consortium Agreement is signed by the authorized representatives of the Parties.
48. Intellectual Property/Trademarks: All intellectual property rights existing and owned by a Party prior to the Effective Date of this Consortium Agreement or that will be conceived, developed, created or put to practice by a Party independent of the activities pursuant to this Consortium Agreement, and any enhancement, modification, customization or derivative work thereof shall belong to the Party owned such rights or conceived, developed, created or put to practice such rights. Neither party shall gain by virtue of this Consortium Agreement any rights of ownership of copyrights, patents, trade secrets, trademarks or any other intellectual property rights owned by the other. If the parties decide to undertake any joint development pursuant to this Consortium Agreement, any such joint development shall be governed by a separate joint development agreement to be negotiated in good faith by the parties and executed prior to the commencement of any joint development efforts.
49. Neither party, without the express prior written consent of the other party, shall use the trademarks, service marks, proprietary words or symbols of the other party.

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50. Nothing in this Consortium Agreement shall affect either party's right to use any trademarks, service marks or proprietary words or symbols of the other party to properly identify the goods or services of such other party to the extent otherwise permitted by applicable law or by written agreement between the parties.
51. Good Faith Negotiation & Arbitration: If any matter arises between the Parties about this MoU then the Parties shall meet to discuss the matter and shall negotiate in good faith to endeavour to resolve the matter. However, if any matter arising has not been resolved by the parties within thirty (30) days after the date the party raising the matter gave notice of it to the other Party then the matter shall be submitted by the either party to Arbitration. The arbitration shall be conducted as per the provisions of Indian Arbitration and Conciliation Act, 1996 read with Indian Arbitration and Conciliation (Amendment) Act, 2015 and any statutory modification or re-enactment thereof and shall be held in New Delhi, India.
52. Arbitration shall be conducted by a tribunal of three arbitrators, each party to nominate one arbitrator and the two arbitrators so appointed shall appoint the third arbitrator.
53. The arbitration proceedings shall be conducted in English language.
54. The award of the arbitral tribunal shall be final, conclusive and binding on both the parties to the agreement.
55. Each Party shall bear the cost of preparing and presenting its case, and the cost of arbitration, including fees and expenses of the arbitrators, shall be shared equally by the parties unless the award otherwise provides.
56. Governing Laws and Jurisdiction: This MoU shall be governed and construed in accordance with the laws of India and courts in New Delhi shall have exclusive jurisdiction in the subject matters of this MoU.
57. Limitation of Liability: Except for claims of intellectual property infringement or breach of confidentiality obligations, in no event shall either party be liable to the other for consequential, indirect, incidental or special damages arising from any claim or action hereunder, whether based on contract, tort or other legal theory, even if such party was informed of possibility of such damages.
58. Relationship of the parties: That it is clarified by and between the members of the Consortium that execution to this Consortium/ Memorandum of Agreement by the members of the Consortium does not constitute any type of partnership for the purposes of provisions of the Indian Partnership Act and that the members of the Consortium shall otherwise be free to carry on their independent business or commercial activities for their own respective benefits under their own respective names and styles. This Consortium Agreement is limited in its operation to the specified project.
59. Force Majeure: The parties shall strive to fulfill their obligations under the Consortium Agreement. However, in the event of Force Majeure such as War, Fire, Riot, strikes, natural calamity, Act of State etc. when the parties are unable to fulfill their obligations, it is agreed that neither party shall be held responsible for any loss/damage or consequential losses or damage to the other party.
60. Severability: If any provision of this Consortium Agreement is determined to be invalid, illegal or unenforceable by any governmental entity, the remaining provisions of this Consortium Agreement to the extent permitted by Law shall remain in full force and effect.
61. This Consortium Agreement is signed by authorized representatives of the Parties. IN FAITH AND TESTIMONY WHEREOF, THE PARTIES HERETO HAVE SIGNED THESE PRESENTS ON THE DATE, MONTHS AND YEAR FIRST ABOVE WRITTEN.

<Lead Bidder>

Name:

<Party 2>

Name:

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(Authorized Signatory)

(Authorized Signatory)

Signature:

Signature:

Name of Company:

Name of Company:

Date:

Date:

Witness 1:

Witness 1:

Witness 2:

Witness 2:

Enclosure:

Board resolution/ Power of Attorney of each of the Consortium Members authorizing:

- (i) Execution of the Consortium Agreement, and
- (ii) Appointing the authorized signatory for such purpose.

Exhibit A – Scope of Work

Responsibility Matrix

It is agreed between the parties that the Division of work between parties is as per the responsibility matrix defined below:

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12 Form 12- Financial Bid Format

Name of Bidder:

Tender No:

Tender Date:

Station Category	Annual Price for Minimum Guarantee Amount (for all stations)- excl. of applicable taxes In INR Cr
B & C	Rs.....

*The number of stations may be increased or decreased by 10% due to reclassification of stations category by Indian Railways or inclusion of stations of any other Railway in the Scope of the work. In that case the minimum guaranteed payment to RailTel will be changed proportionally

Authorised Signatory Name:

Signature with Date:

Stamp:

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Section V

Scope of Work

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Section V - Scope of Work

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1 About RailTel

RailTel Corporation of India Limited (RailTel), an ISO-9001:2008 organization is a Government of India undertaking under the Ministry of Railways. The Corporation was formed in Sept 2000 with the objectives to create nationwide Broadband Telecom and Multimedia Network in all parts of the country, to modernize Train Control Operation and Safety System of Indian Railways and to contribute to realization of goals and objective of national telecom policy 1999. RailTel is a wholly owned subsidiary of Indian Railways.

RailTel with strong nationwide presence is committed to bring cutting edge technology and offer innovative services to the Indian Telecom market. RailTel is in the forefront in providing nationwide Broadband Telecom & Multimedia Network in all parts of the country. With its Pan India high capacity network, RailTel is working towards creating a knowledge society at various fronts.

In addition, RailTel with its rich experience in the domain of Telecom and ICT field have been selected for implementation of various mission-mode Govt. projects in the telecom field including National Optical Fibre Network (NOFN), National Knowledge Network (NKN) and NE-I & NE-II under USOF/DoT etc.

In line with its commitment to bring next generation telecommunication technologies and services to people across the length and breadth of the country, RailTel has recently partnered with Google to set-up a high-speed Wi-Fi network at train stations across the country.

2 Scope of Work

RailTel invites bids from firms (such as IT / Telecom Service Providers/ Wi-Fi Solution Provider etc.) having previous experience of providing similar wi-fi services to reputed organization/agencies/government bodies etc.

The Wi-Fi project is being executed by RailTel Corporation on behalf of Indian Railways. The project consists of deployment and maintenance of Wi-Fi network at 302 B Category & 363 C Category Railway Stations and monetization from 302 B Category & 464 C Category stations through specified revenue streams on a 50:50 revenue share with minimum guaranteed revenue model.

Broadly, the work consists of design and deployment of the Local Area Network (LAN), Wi-Fi Radio Access Network (RAN) including site assessment, Radio Frequency (RF) and capacity planning, access point sourcing, procurement, installation and acceptance testing at the specified stations. The bidder will be responsible for procurement, delivering, installing and staging the equipment at the sites for WiFi network and operation & maintenance of network.

Bidder shall be responsible for end-to-end implementation of the “Wi-Fi Services” project at each railway station (supply, installation, operation and maintenance of LAN, Wi-Fi devices and services, details provided in Section – V, Clause 6). Bidder shall supply, install, operate and maintain (a) LAN network from RailTel PoP b) Wireless Access Point Devices and its Management System software / hardware (b)Wi-Fi network at each station (including cabling) (c) other hardware/software/application(s) required to manage Wi-Fi services at each railway station.

For proper network coverage, minimum 2 nos. of APs per platform should be installed at C- Category Railway Stations, and minimum 2 nos. of APs in main platform and minimum 1 nos. of APs in other platforms at B-Category Stations.

should be at least 60% of the station area at C-Category stations and at least 40% of the station area at B-Category stations.

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Bidder has to extend the connectivity from RailTel's POP to station area.

"Wi-Fi Services" project has been envisaged to operate on shared minimum guaranteed revenue basis between RailTel and Bidder. Bidder is expected to adopt suitable revenue model to generate revenue through digital advertisement on captive portal, mobile data off-load and paid wi-fi.

3 Roles and responsibilities

3.1 Bidder's roles and responsibilities are as follow.

- 3.1.1 Survey, finalization of layout with joint signature of RailTel, Railways and bidder.
- 3.1.2 Provide secure LAN (Fiber Switch, Access Switch, aggregate router, outdoor AP, wireless controller), Wi-Fi internet access and back-end services as per committed SLAs
- 3.1.3 To design and deploy the Local Area Network (LAN), Wi-Fi RAN including site assessment, Radio Frequency (RF) and capacity planning, access point sourcing, procurement, installation and acceptance testing at Railway stations. Bidder shall plan for high availability, reliability and redundancy of the access network elements as per requirements stated in the SLA.
- 3.1.4 To procure, deliver, install and staging the equipment at the sites for WiFi network.
- 3.1.5 To provide on-going support for the equipment and deliverables, through remote monitoring and remote maintenance.
- 3.1.6 Responsible for LAN architecture.
- 3.1.7 To provide following component for the Wi-Fi RAN:
 - a) Access points with dual band radios and supporting the 802.11n standard (or better)
 - b) Associated cables, racks and mini-UPS (Uninterrupted Power Supply) equipment.
 - c) Element management system for APs.
 - d) Additional components as may be required based on a suitable design solution/technology for enabling monetization of Wi-Fi services at the sites.
- 3.1.8 Wi-Fi Locations at Railway stations
 - 3.1.8.1 BIDDER shall be responsible for design and RF planning for the determination of Access Point locations.
 - 3.1.8.2 Commissioning & deployment of the hotspot solution
 - 3.1.8.2.1 BIDDER shall be responsible for installation of LAN and Access Points and related equipment at hotspot location
 - 3.1.8.2.2 BIDDER shall be responsible to for backhaul connectivity provisioning using RailTel network and related equipment at locations
 - 3.1.8.2.3 BIDDER shall be responsible for getting necessary permission, approvals and space for installation of equipment and cabling at the location
 - 3.1.8.2.4 BIDDER shall be responsible for providing and executing Cabling, testing etc.
 - 3.1.9 To cover the cost of deployments of APs and associated cables, racks and UPS equipment. The bidder will bear the full cost of design and deployment of RAN, including purchase of the component mentioned above.
 - 3.1.10 To implement and maintain logical and physical security measures, in accordance with all applicable laws, regulations or ordinances in India regarding to access, collection, storage, transfer, processing or use of data and information ("Data Security Law").
 - 3.1.11 Solution proposed should be managed using a central session & service controller.
 - 3.1.12 Survey, finalization of layout with joint signature of RailTel, Railways and bidder.
 - 3.1.13 Provide secure Wi-Fi internet access and back-end services as per committed SLAs
 - 3.1.14 AAA (Authentication Server), NMS- Network Management System
 - 3.1.15 Manage Operations and Maintenance (O&M) at the Wi-Fi locations.
 - 3.1.16 Set up LAN network and Wi-Fi Hotspots across locations proposed in phased manner.
 - 3.1.17 Compliance to all mandatory government regulations.

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- 3.1.18 Bidder shall be responsible for design and engineering of all the network components to meet capacity requirements
- i. Network shall be designed keeping in view the peak load conditions.
- 3.1.19 To provide Equipment and network upgrades, support and maintenance
- i. Bidder shall provide local support at each station for repair and maintenance of all equipment, cabling and connectivity provided at the hotspot locations
 - ii. Bidder shall be responsible for periodic updates of all equipment, cabling and connectivity provided at the hotspot locations.
- 3.1.20 Cost of all the installation material shall be borne by the bidder as a part of installation & commissioning charges.
- 3.1.21 RailTel will coordinate with station authorities to provide necessary security as provided for similar valued assets in the Railway station. BIDDER at its discretion may take necessary steps like insurance/AMC, for all the equipment. RailTel will not be responsible for bidder's equipment installed in any way.
- 3.1.22 Carrying all IT and non-IT work required at the end points including identification of space etc required to set up the network.
- 3.1.23 Set up and management of NOC for handling queries of the users.
- 3.1.24 Taking/Extending Connectivity from RailTel's switches to the proposed Wi-Fi site.
- 3.1.25 To provide billing solution and accounting software for the proposed revenue streams.
- 3.1.26 Development of marketing plan and carrying out marketing activities to promote the approved services.
- 3.1.27 To provide adequate Security mechanisms in the Wi-Fi service equipment so as to prevent unauthorized access or interfaces to services, calls, protocols and data.
- 3.1.28 The system shall comply with RDSO Specification wherever RDSO specifications are available.
- 3.1.29 Supply of any other equipment/infrastructure or services required for the proper installation, testing, commissioning, operation, and maintenance of the Infrastructure of the Wi-Fi solution as per the approved design.
- 3.1.30 Supply of all software/licenses for the solution including peripheral applications, middleware, environmental software or any other related software/licenses as required in the proposed solution (Including AMC and Warranty).
- 3.1.31 To demonstrate the functioning of all the modules of software and features of hardware component as and when required by Railways/RailTel.
- 3.1.32 Comprehensive Maintenance till project period.
- 3.1.33 AMC (including repair / replacement of all consumables) for the project period.
- 3.1.34 After the completion of contract duration, the successful bidder shall handover the Wi-Fi commissioned system in working condition to RailTel.
- 3.1.35 Provision of maintenance free earth with earth value less than 1 Ω as per the approved drawing.
- 3.1.36 To commission the Services in a timely and professional manner. BIDDER shall use commercially reasonable efforts to provide the Services during all days without any interruption in accordance with industry standards, except where such interruption arises out of, results from, or is related to an event of Force Majeure or other cause or circumstances beyond the reasonable control of BIDDER;
- 3.1.37 Responsible for the service design / content of customer registration / login page/ web pages with the concurrence of RailTel. To design and commission the Wi-Fi network with high for Mobile Data Offload (MDO) services.
- 3.1.38 To provide required manpower at railway stations for O&M of infrastructure in consultation with RailTel.
- 3.1.39 Update technology as and when new features are available.
- 3.1.40 Responsible for generating revenue through affiliate marketing & advertisement (Cost per click advertising, digital banner ads, etc).

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- 3.1.41 Shall facilitate seamless integration with existing Wi-Fi system being set up in other sections by RailTel.
- 3.1.42 To provide the Transport Network-Provide secure LAN (Fiber Switch, Access Switch, aggregate router).
- 3.1.43 Adequate Security mechanisms shall be provided in the Wi-Fi service equipment so as to prevent unauthorized access or interfaces to services, calls, protocols and data.
- 3.1.44 Cabling and managing the electricity of all the equipment of WiFi network.
- 3.1.45 Space as feasible will be provided along with normal power supply by Indian Railways, and backup power supply will be arranged by the bidder.
- 3.1.46 Supply, laying and fixing of electrical wiring and network cabling including OFC.
- 3.1.47 Responsible for generating revenue through sharing infrastructure for Mobile Data Offload with other cellular operators.
- 3.1.48 Set up and management of NOC for handling queries of the users.
- 3.1.49 Taking/Extending Connectivity from RailTel's Location (Point of Presence at each platform) upto the proposed Wi-Fi site.
- 3.1.50 Bidder shall provide minimum 1 number of 16X7 and minimum 1 number of 24X7 manpower support and associated IT equipments at RailTel's NOC
- 3.1.51 The other additional responsibility of the contractor under the scope of work for this tender shall be as under:

i) Excavation of trenches and laying of HDPE Duct in all types of soils, Road/Rail crossing, in building, clamping etc. & protective works.

ii) Back filling and dressing of the excavated trenches.

iii) Blowing/pulling of Optical Fiber Cable (24F/6F) with proper tools and accessories.

iv) Installation of Jointing Chambers & Route/Joint Indicators.

v) Splicing of fibres in Joint closures/FMS and installation of new joint enclosures/FMS.

vi) Laying of power cables, Ethernet cables in DUCT, PVC conduit.

vii) Installation of Routers, PoE switches, APs, Patch Cord, MCB, Access Switch, 6U/9U rack & UPS at suitable height on platforms with all sorts of angle, nuts etc.

viii) End to end testing & submission of test results, route diagrams for final Commissioning of WiFi in co-ordination with field staff, NOC/CNOC of RailTel

ix) Installation and monitoring of the UPS

- 3.1.52 All respective hardware/software should be as per the Technical Specification provided at clause 6 of this section.

3.2 Roles and responsibilities of RailTel

- 3.2.1 To provide internet bandwidth at stations/sites with Gigabit Ethernet interfaces to support the requirements of the project.
- 3.2.2 To coordinate with Railways for space/area for the bidder to install Equipment/s.
- 3.2.3 To provide access to each Platform to install the equipment and help, wherever required in installing and commissioning of these equipment and get the required permissions. This will extend to the maintenance jobs to be undertaken by bidder.
- 3.2.4 To provide 24X7 support for any RAILTEL network connectivity issues, through its Network Operation Centre (NOC).
- 3.2.5 To provide the interconnection facility at their POP to integrate the station network.

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- 3.2.6 Data centre space for NMS, AAA, Wifi controller and other associated items shall be provided by RailTel in RailTel's Data Center at no cost to bidder. The space requirement should not exceed 10U, any requirement above 10U shall be charged to bidder.
- 3.2.7 To provide sufficient IP transit and peering capacity to meet the desired QoS specifications to ensure that WiFi service is not congested at any time.
- 3.2.8 Sitting arrangement for 2 manpower of bidder shall be arranged by RailTel in RailTel's NOC

4 Project Design

- 4.1 Eligible Bidder will be selected for providing end-to-end Wi-Fi services.
- 4.2 Bidders shall adopt sustainable revenue model for providing Wi-Fi Services to users. The Managed Service provider shall provide first minimum 30 minutes of Wi-Fi service free of cost to each user for each day. Any usage beyond the first 30 minutes shall be charged as per BIDDER revenue model. Actual duration of required free service shall be decided at a later stage, however it would be min.30 mins.
- 4.3 The 'Contract Term' for Wi-Fi project implementation shall be for a period of 7 years (including implementation period) from the date of security clearances, unless revoked earlier for whatever reasons. RailTel may extend, if deemed expedient, the contract term in block of 2 year at a time, suo- moto or upon request of bidder. The decision of RailTel shall be final in regard to the grant of extension. The extension of the contract shall be at mutually agreed revenue share and other terms and conditions.
- 4.4 The time duration for the implementation of the project is envisaged to be 6 months.
- 4.5 BIDDER shall be required to setup a central customer support and technical helpdesk for the services during the entire project period.
- 4.6 Revenue generation shall be the responsibility of the BIDDER. BIDDER shall make reasonable efforts to increase revenue during the project period. RailTel will also have the option of using alternate means of generating advertising revenue without affecting the revenue share.
- 4.7 Revenue Share: It is envisaged that the revenue streams can be broadly categorized into
 - i) Digital advertisement-based revenue
 - ii) Mobile data offload
 - iii) Paid wi-fiRevenue generated from the project has to be shared in 50:50 ratio of revenue or min. guaranteed revenue (whichever is higher for the year) to RailTel. All project revenue would be collected by the successful bidder in an escrow account. The escrow shall be set-up in a public-sector bank in India. The rules and policies to operate and manage the escrow account would be conveyed to the successful bidder. The revenue collected in the escrow account would be distributed amongst the successful bidder and RailTel as per the schedule agreed in the terms and policies. However, the successful bidder shall prepare a statement of reconciliation for each quarter.
- 4.8 Bidders will have to submit project plan with timelines accepted by RailTel along with the bid.

5 Overview of the Proposed Solution

To start with access points or Point of Presence (PoP) shall be provisioned at railway stations implemented in controller-based model where access points shall be managed by using wireless controller, which shall be positioned at Data centre (RailTel).

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The BIDDER shall design the Wi-Fi setup at each location to accommodate the users' bandwidth need and requirements. The profiling of users and appropriate policies shall be pushed from RailTel data centre. The wireless controllers shall also be integrated with AAA (Authentication server) to properly manage the policies, which may be required for different user types. The access points shall negotiate using SSID with controller. The controllers register the access points and accordingly allow the access point post checking with AAA server

5.1 Indicative Architecture Diagram

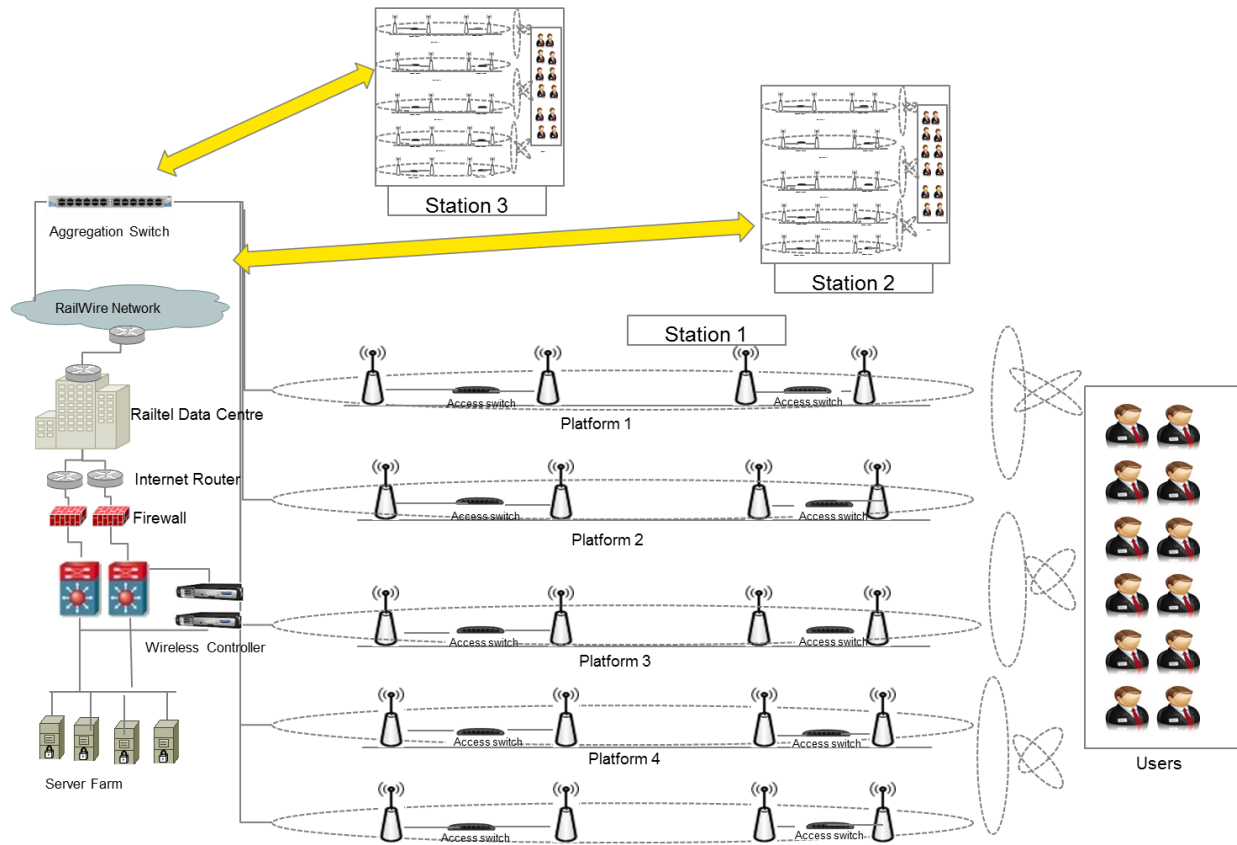


Figure 1

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6 Technical Specifications

Detailed technical specifications for each of the following items are available in the given annexures.

6.1 Fiber Switch – Annexure -1

Fiber Switch	
SN	Technical specification
1	Should have 24 ports SFP Based Gigabit ports.
2	Should have support for 4 ports SFP+ Based Gigabit ports.
3	Should have at least 120 Gbps switching fabric.
4	Packet forwarding rates 90 million PPS
5	Should support at least 16Kentries in the MAC table.
6	Should Support 255 minimum VLANs.
7	Should have AC and DC power supply arrangement as given below in chassis without any external adaptors :
	i) AC Power Supply 100 to 240 V AC with 50 to 60 Hz
	ii) -48V DC supply
	DC power supply should work as a redundant power supply to power-on the switch in case failure of AC power supply.
8	Should support Dual Images.
9	Should support Optical Transceiver Digital Diagnostic Monitoring for All SFP ports of 1G and 10G
10	Should support port mirroring and jumbo frame.
11	Should support following for min. 64 Groups :
	i) IGMP Snooping,
	ii) IGMP v1/v2/v3 awareness Snooping,
	iii) IGMP Snooping Queried.
12	Should support spanning-tree root guard, Port Fast and BPDU Guard/Filter or similar functionalities.
13	Should support following security features viz.:
	i) Web Management (HTTPS)/HTTP/SSH/Telnet
	ii) Broadcast/Multicast/Unicast Storm Control,
	iii) DoS Attack Prevention
14	Switch should support following SNMP traps
	i) Interface UP & Down
	ii) Optical power SFP threshold alarms
	iii) STP Topology Changes and New root bridge
	iv) LLDP table changes
	v) Threshold alarms for Temperature.
	vi) Ethernet OAM SNMP alarms.
15	Switch should comply to following Temperature performance parameters :

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	i) Operating Temperature - min -0 to 50 °C (23 to 122 °F)
	ii) Storage Temperature - min -0 to 70 °C (-40 to 158 °F)
16	It shall support MAC address notification to allow administrators to be notified of users added to or removed from the network.
17	The switch shall be designed for continuous operations.
18	IPv6/v4-L3 and IPv6-Multicast functionalities/features for Switches are desired but not mandatory.
19	Safety Requirement :-
	Switch should have safety compliance of UL.
20	Electromagnetic Compatibility (EMC) Requirements:-
	Switch should have EMC compliance of CE and FCC.
21	The LAN switch shall support a console port or auxiliary/Ethernet port for the purpose of local and remote configuration and diagnostics.
22	The LAN switch shall support built in power diagnostics system to detect hardware failures.
23	IPv6 feature should be ready from day 1.
24	Qualitative Requirements:-
	i. The equipment shall be manufactured in accordance with the international standards ISO 9000:2008 or later for which the manufacturer shall be duly accredited. A quality plan describing the quality assurance system followed by the manufacturer shall be required to be submitted
	ii. The MTBF (Mean Time Between Failure) and MTTR (Mean Time To Repair) predicted and observed values shall be furnished along with calculations by the manufacturer.
25	Switch should support following Metro Ethernet Features:
	i. Q in Q , Double VLAN (Q-in-Q) ,Port-based Q-in-Q and VLAN Translation
	ii. IEEE 802.1ag Ethernet OAM: Connectivity Fault Management
	iii. Ethernet OAM compliant with IEEE 802.3ah/Y.1731
	iv. ITU-T G.8032 Ethernet Ring Protection designed for loop protection and fast convergence times (sub 50 ms) in ring topologies.
	v. L2 Protocol Tunneling.
	vi. Loopback Detection
	The operating system of the Switches category/series/family should be MEF-9/14 or CE (Carrier Ethernet) Certified/compliant.

6.2 Access Switch PoE – Annexure-II

POE Switch	
SN	Technical specification
1	Should have 8 ports 10/100/1000 Mbps Base T
2	Should have support for 2 ports SFP Based Gigabit ports.
3	Should have at least 20 Gbps switching fabric.
4	Should support at least 8Kentries in the MAC table.

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5	Packet forwarding rates 14 million PPS
6	Should Support 255 minimum VLANs.
7	Switch should support IEEE 802.3af & IEEE 802.3at on Ethernet ports & Min 120W PoE Power Budget.
8	Should have AC Power Supply 100 to 240 V AC with 50 to 60 Hz and equipped with 3 pin plug.
9	Should support Dual Images.
10	Should support port mirroring and jumbo frame.
11	Should support following for min. 64 Groups :
	i) IGMP Snooping,
	ii) IGMP v1/v2/v3 awareness Snooping,
	iii) IGMP Snooping Queried.

6.3 Outdoor AP – Annexure – III

WiFi Outdoor Access Points		
Reference	Parameters	Technical specification - Proposed
CT2HW1	Hardware	Access Points proposed must include radios for both 2.4 GHz and 5 GHz.
CT2HW2	Hardware	Must have a robust design for durability, without visible vents
CT2HW3	Hardware	Must include dual band antennas to support both the 2.4GHz and 5GHz operations simultaneously.
CT2HW4	Hardware	Proposed access point shall support MDO(Mobile Data offload)
CT2HW5	Hardware	Mounting kit should be standard which shall be used for mounting access point
CT2HW5	Hardware	Must support operating humidity of 10 to 90% (noncondensing)
CT2WS1	wireless Standard	Must support 2X2 multiple-input multiple-output (MIMO) with TWO spatial streams
CT2WS2	wireless Standard	Must support simultaneous 802.11n on both the 2.4 GHz and 5 GHz radios. And must support 802.11ac Wave 2 on 5ghz .
CT2WS3	wireless Standard	Must support data rates upto 800 Mbps on 5Ghz radio and 140mbps on 2.4Ghz radio.
CT2WS4	wireless Standard	Must support 40 MHz and 80 MHz wide channels in 5 GHz.
CT2WS5	wireless Standard	Antenna Gain of Access Points must be +2dBm or better.
		Must support following minimum transmit power for both 2.4Ghz and 5Ghz radios.
		(i) 2.4-Ghz band : +21dBm
		(ii) 5.0-Ghz band: +24dBm

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CT2WS6	wireless Standard	AP should support VLAN trunking (802.1q) and VLAN based SSID for user traffic.
CT2RF1	RF	The Wireless AP should have the technology to improve downlink performance.
CT2RF2	RF	The AP shall be able to load-balance between 2.4Ghz and 5Ghz band.
CT2RF3	RF	Must have -90dB to -100dB or better Receiver Sensitivity.
CT2RF4	RF	Must incorporate radio resource management for power, channel, coverage hole detection and performance optimization
CT2RF6	RF	Should support configurable carrier sense threshold
CT2M1	Mesh	The Wireless Backhaul shall operate in 5Ghz
CT2M2	Mesh	Support Encrypted and authenticated connectivity between all backhaul components
CT2M3	Mesh	Access point shall have wired uplink interfaces i.e. 1X10/100/1000BASE-T Ethernet
CT2R1	Roaming	Must support Proactive Key Caching and/or other methods for Fast Secure Roaming.
CT2S1	Security	Must support Management Frame Protection.
CT2S2	Security	Should support locally-significant certificates on the APs using a Public Key Infrastructure (PKI) or preinstalled certs on AP for authentication
CT2S3	Security	Provision of Wireless IPS to filter malicious traffic
CT2E1	Encryption	Access Points must support a distributed encryption/decryption model.
CT2E2	Encryption	Access Points must support hardware or software based encryption
CT2M1	Monitoring	Must support the ability to serve clients or monitor the RF environment.
CT2M2	Monitoring	AP model proposed must be able to be both a client-serving AP and Parallely monitor- Intrusion Prevention services.
CT2F1	Flexibility:	Should support mesh capabilities for temporary connectivity in areas with no Ethernet cabling.
CT2F2	Flexibility:	Should support QoS for voice over wireless.
CT2F3	Flexibility:	Must support Controller-based and standalone(autonomous) deployments

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CT2F4	Flexibility:	Must support 16 WLANs per AP for SSID deployment flexibility.
CT2O1	Operational:	Must support telnet or SSH or console login to APs directly for troubleshooting flexibility.
CT2O2	Operational:	Must support automatic detection of dropped connection to controller,
CT2O3	Operational:	Must support automatic failover to secondary controller, upon detecting lost connection to controller
CT2O4	Operational:	Must support DHCP Option 82, defined in RFC 3046, including support for Sub-option 01 (Circuit-Id) and Sub-option 02 (Remote Id) fields.
CT2O5	Operational:	With Controller APs (from a data-plane perspective) must support:
		- Ethernet over GRE IPv6 tunnel
		- Automatic detection of failed tunnel termination, with configurable connection retry and timeout.
		- Automatic failover to secondary tunnel termination address.
CT2O6	Operational:	Support for basic AP monitoring statistics for each radio: Bytes Sent, Bytes Received, Packets Sent, Packets Received,
		Radio Channel Utilization, Noise.
CT2O7	Operational:	Must support data-plane split tunneling in which ACLs may be configured to enable a range of destination net blocks and/or IPs to bypass the data-plane tunnel and be bridged on the wired interface.
CT2O8	Operational:	AP should have capability to split tunnel for both IPv4 and IPv6 tunnel to segregate the management and data traffic.
CT2O9	Operational:	AP should have capability to split tunnel for specific destination IP/Subnet (For implementing policy based Caching solutions) using local NAT and forward user traffic.
CT2O10	Operational:	The AP shall support 200 concurrent Clients per AP
CT2O11	Operational:	APs shall support SNMP v1 Or higher (V2/V3)
CT2P1	Power:	Must support Power over Ethernet/PoE+/UPoE/Power Injector/AC/DC .
CT2Q1	Quality of Service:	shall have the support of 802.11e and WMM

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CT2Q2	Quality of Service:	Should be Wi-Fi Alliance certified and WPC Approved and ETA Certified
CT2Q3	Quality of Service:	Must support QoS to prioritize video ,voice and Data traffic
CT2EES1	Environmental and Electrical Specifications	Must support QoS and Video Call Admission Control capabilities.
CT2EES2	Environmental and Electrical Specifications	Access point shall support powering from POE/PoE+/UPoE /Power Injector/AC/DC.
CT2EES3	Environmental and Electrical Specifications	Access point shall support pole, wall, and roof mounting options.
CT2EES4	Environmental and Electrical Specifications	Geographic orientation flexibility – tilt angle for pole, wall, and roof mounting units
CT2EES5	Environmental and Electrical Specifications	The equipment shall support up to 100 MPH sustained winds & 140 MPH wind gusts.
CT2EES6	Environmental and Electrical Specifications	The Access point shall be IP67 certified.
CT2EES7	Environmental and Electrical Specifications	The Access point shall be rated for operation over an ambient temperature range of 0C to +55 C
CT2EES8	Environmental and Electrical Specifications	Should Support Surge Protection on Ethernet Ports to meet the requirement at High Voltage Transmission Line running across the Railway Platform. If any OEM/Bidder can't provide inbuilt surge protection in AP, external surge protection must be proposed. Surge protection of ± 2 kV on copper Ethernet ports.

6.4 Wireless Controller – Annexure-IV

Specification of Cloud/Appliance based Wireless Controller

The below mentioned parameters are minimum specifications of the controller. Bidders has to propose Cloud/Appliance based Wireless Controller to meet the requirement as per the tender.

Reference	Parameters	Technical specification - Proposed
WCHW1	Hardware and Standards	Must be compliant with IEEE CAPWAP or equivalent for controller-based WLANs.

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WCHW2	Hardware and Standards	Controller should support 2U form factor and multiple stackable controllers must be proposed from Day One from single chassis of minimum 2000 Access Points. Proposed controller should support 1+1 or N+1 redundancy from the day one. The solution should be scalable to support 20,000 or more APs. Note: - Access Point Licensees on wireless controllers should be given as per SOR/PO/LOA(Access point total Qty) + 20% extra.
WCHW3	Hardware and Standards	Controller must have at least 4 x 10Gbps of uplink interfaces.
WCHW4	Hardware and Standards	Controller shall support 10,000 concurrent sessions from a single chassis
WCHW5	Hardware and Standards	WLAN controller shall support Mobile data offload as a feature or as a solution.
WCC1	Compatibility	Deleted
WCHA1	High Availability	Must support 1+1 or N+1 redundancy models.
WCHA2	High Availability	Must have feature for stateful recovery without re-authentication of the client in the event of LAN and WLAN infrastructure disruption to deliver a non-stop client session
WCHA3	High Availability	Must support internal 230 VAC redundant power supplies.
WCRF1	RF Management	Must support an ability to dynamically adjust channel and power settings based on the RF environment.
WCRF2	RF Management	Radio coverage algorithm must allow adjacent APs to operate on different channels, in order to maximize available bandwidth and avoid interference
WCRF3	RF Management	Must have Automatic 802.11 interference detection, identification, , and mitigation-
WCRF4	RF Management	Must support coverage whole detection and correction
WCRF5	RF Management	Must support RF Management with 20/40/80 MHz channels with 802.11a/b/g/n/ac
WCIP1	IPv6 features	WLC should support L2 and L3 roaming of IPv6 clients.
WCIP2	IPv6 features	WLC should support Guest-access functionality for IPv6 clients
WCP1	Performance:	Controller performance must remain the same if encryption is on or off for wireless SSIDs except the throughput processing of the controller.
WCS1	Security:	Should adhere to the strictest level of security standards, including 802.11i Wi-Fi Protected Access 2 (WPA2), WPA, Wired Equivalent Privacy (WEP), 802.1X with multiple Extensible Authentication Protocol (EAP) types, including Protected EAP (PEAP), EAP with Transport Layer Security (EAP-TLS), EAP with Tunnelled TLS (EAP-TTLS)
WCS2	Security:	Should support Management frame protection for the authentication of 802.11 management frames by the wireless network infrastructure.
WCS3	Security:	Deleted
WCS4	Security:	Controller should have rogue AP detection and automatic containment feature
WCS5	Security:	Controller should be able to detect attacks like Broadcast deauthentication, NULL probe, from day one for all access points

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WCS6	Security:	Controller should have profiling of devices based on protocols like HTTP/DNS, DHCP and more to identify the end devices on the network
WCG1	Guest Wireless	Must support internal and external web authentication.
WCF1	Functionality	Must be able to set a maximum per-user bandwidth limit on a per-SSID basis.
WCF2	Functionality	Must support user load balancing across Access Points.
WCF3	Functionality	Controller must provide Mesh capability for Mesh supported AP.
WCM1	Monitoring	Deleted
WCR1	Roaming:	Deleted
WCR2	Roaming:	Solution proposed must support clients roaming across at least 500 APs.
WCO1	Operational:	Must support AP over-the-air packet capture for export to a tool such as Wire shark.
WCO2	Operational:	Should be able to classify and identify different types of interference
WCO3	Operational:	Should provide a snapshot of air quality in terms of the performance and impact of interference on the wireless network identifying the problem areas.
WCO4	Operational:	Should provide real-time charts showing interferers per access point, on a per-radio, per-channel basis.
WCO5	Operational:	Should support encrypted mechanism to securely upload/download software images to and from wireless controllers
WCO6	Operational:	Must support Ethernet over GRE IPv4 tunnel to northbound gateway
WCO7	Operational:	Must support Ethernet over GRE IPv6 tunnel to northbound gateway.
WCO8	Operational:	Must support automatic detection of failed tunnel termination, with configurable connection retry and timeout
WCO9	Operational:	Must support automatic failover to secondary tunnel termination address.
WCO10	Operational:	Must support controller-based configuration of Ethernet over GRE tunnel termination
WCO11	Operational:	must be wifipasspoint 2 complaint
WCO12	Operational:	System shall support various modes of operations like Tunnel Mode and local Breakout on the Same AP
WCO13	Operational:	Must support configuration of data-plane split tunneling by enabling specific destination IP addresses and net blocks to bypass the data-plane tunnel and be bridged on the wired interface
WCO14	Operational:	Deleted
WCO15	Operational:	shall support API's for NB and SNMP Integration with CNMS
WCO16	Operational:	System shall support Reporting functionality with or without external server
WCO17	Operational:	should support following Information through SNMP
		i) Interface utilization.
		ii) Interface errors and discards.
		iii) Connected APs (count) , Connected Clients (count),Access Point Failed Assoc. Count
		iv) Connected Stations (count), Admin Status (on/off) ,Broadcast SSID (on/off).

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		v) CPU and Memory statistics.
		vi) AP name , AP IP address ,AP Model , AP uptime , AP admin status , operational status ,POE Status ,Ethernet speed , number of clients and AP mode .
		vii) Should also support snmp traps on failure conditions.
WCO18	Operational:	Reports type like number of clients, system resource utilization, Transmit and Receive bytes on AP/radio or set of AP or a particular site should be generated.
WCO19	Operational:	The controller should have a troubleshooting tool to detect user experience issues.
WCO20	Operational:	It should display health and traffic data for each AP to evaluate site performance.
WCQ1	QOS:	Must support 802.11e and WMM
WCQ2	QOS:	Shall able to prioritize all traffic such as (Data ,voice and video)
WCQ3	QOS:	Controller shall integrate with existing firewall
WCQ4	QOS:	Should have rate limiting per user and per SSID basis for encrypted tunnel mode
WCQ5	QOS:	To deliver optimal bandwidth usage, reliable multicast must use single session between AP and Wireless Controller.

6.5 Functional Specifications – Annexure- V

Modules	S.No	Specification	Compliance Yes/No	Mandatory
A		General Requirements		
	1	The Solution shall be offered on virtualized environment - Hw, Sw to be quoted.		Yes
	2	The system shall be offered in DC-DR mode. DC site as Gurgaon and DR as Secundrabad, along with HA in DC site.		Yes
	3	The DC-DR site shall work in Active-Active mode. For this, the vendor shall propose the Load Balancers, switches and any other required hardware as per requirement.		Yes
	4	The offered system shall be based on enterprise grade softwares (Operating System, DB etc.) and must have professional support from OEM.		Yes
	5	Installed hardware and Software should support 100% of the capacities requirements of AAA and IP logger from Day 1. Hardware make should be present in the Gartner report.		Yes
	6	All equipment provided in solution shall have uptime for Node/Platform level as specified in SLA sheet		Yes
	7	The Bidder shall provide the monitoring of the Wifi Management system and modules covered in the scope of this tender.		Yes
	8	The expected integrated architecture needs to manage multi-tenancy: Multi-Vendors, Multi-Domains, Multi-Technologies.		Yes
	9	The bidder shall provide logical architecture of its offered solution.		

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	10	Infrastructure utilization should be less than 60% at peak load. Infrastructure can be defined as CPU, memory and other critical hardware/software components which may have impact on overall system performance.		Yes
	11	The offered system should be open for integration with the existing RailTel ticketing system.		
	12	Interfaces: Standard interfaces like REST API, SOAP, HTTP, SNMP for integrating with IT, Network & third party solutions should be supported.		
	13	The solution should be complied with the Public Open Wi-Fi framework of TRAI/TRAI's Wi-Fi Access Network Interface(WANI).		
	14	Solution should comply with the parameters for internet protocol detail record(IPDR) and SYSLOG of Network Address Translation(NAT) as per DOT guidelines No. 820-01/98-LR/Vol.(IX) Pt..I dated 01.10.2013		
B		AAA		
	1	The AAA should support centralized subscriber authentication and authorization at appropriate level of service.		Yes
	2	AAA server should be capable to integrate with Wireless access gateway over RADIUS or Diameter as the case may be.		Yes
	3	AAA should support interoperability with multiple vendor gateways/access network components i.e. AP/AC/WAG/WLC etc.		Yes
	4	AAA server should support Open SSID based authentication and Web based secured login using existing username and password, restricting unauthorized access to the system.		Yes
	5	Proxy Management: AAA should be able to proxy the request to 3rd party AAA.		Yes
	6	AAA should support:		
	6.1	Modify/insert attribute during proxy request.		
	6.2	Accept/reject based on attribute received in request.		
	7	AAA server should produce accounting information in files allowing the export of accounting data to CSV or similar file format.		Yes
	8	The system shall deliver flexibility of authorization attributes based on single user, domain, radius client, etc.		
	9	It shall support authorization based on Access Policy, Concurrent Policy and Radius Policy.		Yes
	10	AAA should support vendor specific dictionary in authentication packet.		
	11	AAA should support real time accounting with RADIUS & Diameter based support, as the case may be.		Yes
	12	AAA should support GUI based configuration in addition to CLI.		Yes
	13	AAA should be able to integrate with any external NMS easily over SNMP.		Yes

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	14	AAA should support Realm policy configuration and service for Wi-Fi.		
	15	AAA should support multiple access Vendors like BelAir, Ruckus, Cisco, ALU, Ericsson etc.		Yes
	16	The AAA should support integration with following network elements:		Yes
	16.1	AAA Proxy		Yes
	16.2	Directory and LDAP		Yes
	17	The AAA should be capable to provide an interface for communication between network components and charging system working on different protocols like RADIUS, DIAMETER and proprietary.		Yes
	18	AAA should be compliant with following RFC's & EAP methods:		
	18.1	RFC 2865: Remote Authentication Dial-In User Service (RADIUS)		Yes
	18.2	RFC 2866: RADIUS Accounting		Yes
	18.3	RFC 2867: RADIUS Accounting Modifications for Tunnel Protocol Support		
	18.4	RFC 2868: RADIUS Attributes for Tunnel Protocol Support		
	18.5	RFC 2869: RADIUS Extensions		
	18.6	RFC 2882: NAS Requirements		
	18.7	RFC 2903: Generic AAA Framework		
	18.8	RFC 2904: AAA Authorization Framework		
	18.9	RFC 2905: AAA Authorization Application Examples		
	18.10	RFC 2905: AAA Authorization Requirements		
	18.11	RFC 3162: RADIUS and IPv6		Yes
	18.12	RFC 3377: Lightweight Directory Access Protocol (v3): Technical Specification *		
	18.13	RFC 3575: IANA considerations for RADIUS		
	18.14	RFC4282 -- The Network Access Identifier		
	18.15	RFC 2284 -- PPP Extensible Authentication Protocol (EAP)		
	18.16	RFC3748 -- Extensible Authentication Protocol (EAP)		Yes
	18.17	RFC4017 -- Extensible Authentication Protocol (EAP) Method Requirements for Wireless LANs		
	18.18	RFC5176 -- Dynamic Authorization Extensions to Remote Authentication Dial In User Service (RADIUS) RFC1334 -- PPP Authentication Protocols		Yes
	18.19	RFC1994 -- PPP Challenge Handshake Authentication Protocol (CHAP)		Yes
	18.20	RFC5090 -- RADIUS Extension for Digest Authentication		
	18.21	RFC2548 -- Microsoft Vendor-Specific RADIUS Attributes		
	18.22	RFC2759 -- Microsoft PPP CHAP Extensions, Version 2		
	18.23	RFC 3580 -- IEEE 802.1 X Remote Authentication Dial In User Service (RADIUS) Usage Guidelines		
	18.24	RFC 4186 -- Extensible Authentication Protocol Method for Global System for Mobile Communications (GSM) Subscriber Identity Modules (EAP - SIM)		
	18.25	RFC 2809 -- Implementation of L2TP Compulsory Tunneling via RADIUS		
	18.26	RFC2251 -- Lightweight Directory Access Protocol (v3)		

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	18.27	RFC2716 -- EAP-TLS, B. Aboba and D. Simon, PPP EAP TLS Authentication Protocol (EAP-TLS) RFC5216 -- The EAP-TLS Authentication Protocol		
	18.28	RFC5281 -- Extensible Authentication Protocol Tunneled Transport Layer Security Authenticated Protocol Version 0 (EAP-TTLSv0)		
	18.29	RFC3539 -- Authentication, Authorization and Accounting (AAA) Transport Profile		
	18.30	RFC5080 -- Common Remote Authentication Dial In User Service (RADIUS) Implementation Issues and Suggested Fixes		
	18.31	RFC 3576: Dynamic Authorization Extensions to Remote Authentication Dial-In User Service (RADIUS)		
	19	The System should support a flexible configuration:		
	19.1	Authentication Rules (RADIUS AVP / VSA)		
	19.2	Authorization Rules (RADIUS AVP / VSA)		
	20	The System should support the ability to add new RADIUS AVP / VSA in the directory.		
	21	The System must support the Transparent Auto-Login (example: for MAC address of the client UE, if it already held Web-Based Authentication in a specified period of time).		
	22	The System should support the ability to work in a mode of RADIUS proxy.		
	23	The system should support API for integration with external system, as the case may be.		Yes
	24	AAA must support Dual Stack - Radius & Diameter together from same instance.		Yes
	25	Convergent solution for FBB & WiFi for offering one broadband package which can be utilised seamlessly.		Yes
	26	Migration of Fixed Broad Band customers from current AAA to the proposed.		Yes
	27	Integration with BRAS & WAGs		Yes
	28	Centrally manages subscribers' authentication & authorizes them for appropriate level of service and ensures centralized subscriber management.		
	29	Platform should be scalable to support 1 mn subscribers with additional scalability.		
	30	Authenticates Wi-Fi/Wireless/Fix Broadband Subscribers users over RADIUS or Diameter.		
	31	Generate accounting IPDR's.		Yes
	32	Support access policy based on different AVP's		
	33	Support all major RFC		
	34	Should Support Integration with LDAP		
	35	The AAA should support BYOD and adaptive captive portal and splash page from day one.		
	36	Multi-vendor VSA support		
	37	AAA shall provide services to the users with help of access gateways (e.g. BNG/BRAS/DPI/WAG etc.) and directory application (SPR/RDBMS).		Yes
	38	AAA shall support split profile functionality. User shall be authenticated from SPR and also shall be flexible to lookup other databases if the need be like LDAP or File(XML) based SPRs.		

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	39	AAA shall support IPDR formatter to map RADIUS and Diameter attributes, AVPs received from accounting message to store locally in CSV format. These CSV format shall be in configurable format.		Yes
	40	AAA shall support authentication process for username & password using characters: a-z, A-Z, 0-9, special characters like: ^ _ + ! @ \$ % & * () - = { } [] " ' : ; < > , . ? ~ \ / < space >		Yes
	41	AAA server shall support Change of Authorization(CoA) and Disconnect Message(DM) to change the profiles of Subscribers in the same on-going session and/or send Disconnection (DM) Message towards GW/BRAS/BNG to disconnect the User for change of Policy.		Yes
	42	AAA shall support Authentication from different GWs and provide different responses in AVPs based on request received. To manage different authorization policies for different GWs.		Yes
	43	AAA shall Authenticate Subscriber based on MAC-Address to Provide Seamless Authentication to Subscribers.		
	44	AAA shall support authentication of Subscribers based on DHCP option 82 for different Access Network Devices. AAA shall support to map different formats of Option-82 parameters based on different Access Network Switches.		
	45	AAA shall support RADIUS and Diameter conversion to communicate with different external systems.		Yes
	46	AAA shall support Centralized configuration management across multiple AAA servers with replication/sync capability.		
	47	AAA admin console shall support Centralized resource management/policy control across multiple AAA servers include but not limited to static IP, IP Pool & session.		
	48	AAA shall support Configuration export/import to/from other format.		
	49	AAA shall support and provide AVPs in sequence as required by VPN(LNS/LAC) GW systems to provide Commands in RADIUS AVPs in sequences.		
	50	AAA shall support scripting for customizations required at AAA application, on the fly.		Yes
	51	AAA shall support AAA services to users through network elements such as BNG (Broadband Network Gateway), WLC (Wireless Access Controllers) of operator with the appropriate QoS (Quality of Service) parameters, to deliver assured SLA (Service level agreement) for the retail or corporate customers and other services.		Yes
	52	It shall also provide a mechanism to initiate a session, terminate a session and initiate session relate dialogues with user through integration with Policy Manager and Portals.		
	53	AAA shall be positioned between access servers and the directory to meet all the access control management, session tracking and management, service delivery management and accounting requirements of service provider.		

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	54	Control must be sensitive to the customer, balance, service, value, partner, location and time profile Irrespective of the mode of Access PPPoE, Captive Portal based.		Yes
	55	It shall manage the authentication of all users/customers –both locally and via proxy RADIUS/DIAMETER and deliver the appropriate level of service to each customer.		
	56	AAA Shall have flexibility to write scripts for addition of custom plug-ins to accomplish configuration related to modification of authentication, authorization process and attributes, interfacing with external systems etc.		
	57	AAA shall have interface with policy engine for defining and implementing AAA policies without need for programming.		Yes
	58	It shall be possible to configure policies on per user or user-group basis or service basis for idle time-out, length of session, IP address assignment, removal of selected attributes from access accept message, attribute mapping, QoS (Quality of Service), bandwidth restriction, IP Filter for allowing access based on destination IP address and protocols or any combination, force establishment of VPN (Virtual Private Network) tunnels etc.		Yes
	59	AAA shall be possible to create Vendor (like BNG/WAG) Specific Attribute definitions and update dictionary by the access server vendors.		
	60	It shall provide an interface for viewing accounting logs by user, port and date etc.		
	61	It shall have standard and configurable logging formats for accounting information.		
	62	It shall support accounting on and accounting off packets when the access server is shut down and restarted.		
	63	System shall be able to generate report for total data usage by all customers on per day/per hours' basis.		Yes
	64	AAA shall integrate with existing eco system		Yes
	65	AAA shall account for service usage by a corporate or retail subscriber for services subscribed by him.		
	66	AAA shall block access for credit limited or zero balance accounts or expired accounts based on any criteria.		Yes
	67	AAA shall block/allow access based on calling or called telephone number, NAS IP address, NAS Port, user-id, service subscribed etc. or their combinations.		
	68	AAA shall be possible to distinguish between access mechanisms, i.e, FBB & Wi-Fi on the basis of NAS Port type.		Yes
	69	AAA Solution shall provide the capability for service differentiation features to distinguish between pre-paid, post-paid and Dial VPN services etc. Solution shall also provide the capability to use @domain to distinguish between pre-paid, post-paid and Dial VPN services etc. It shall be possible to use any of the mechanisms on different remote access servers in the network seamlessly.		
	70	AAA shall control/limit the number of concurrent access for each service or for specific customer or group of customers etc.		
	71	AAA shall control the number of ports and concurrent access for wholesale business.		

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	72	AAA shall allow configuration of remote access servers and their groups within the network, assignment of groups to partners for wholesale of access ports and monitoring each group.		
	73	AAA shall allow identification of user by domain name e.g. differentiating abc@abc.com from abc@xyz.com.		
	74	It shall enable defining access schemes by time-of-days, days-of-week, call type (PSTN, ISDN and DSL etc.), calling number and called number etc.		
	75	It shall provide the services such as:		
	75.1	PPPoE (Point to Point Protocol over Ethernet)		
	75.2	IPoE (Captive Portal IP over Ethernet)		
	75.3	DSL (Digital Subscriber Line) or Cable		
	75.4	Roaming (Both Inbound and Outbound), National and International		
	75.5	Wireless Broadband		
	75.6	Wireless LAN (including 802.1x authentication)		
	75.7	Pre-Paid and Post-Paid services		
	76	AAA shall interoperate with any RFC compliant RADIUS for distribution of authentication and accounting information.		
	77	AAA shall be access agnostic.		
	78	AAA shall be configurable to understand various Vendor (like BNG/WAG) Specific Attributes for multi-vendor network elements. It shall be possible to customize the AAA for support of other network elements which may be deployed in future.		
	79	AAA shall be possible to deploy multiple AAA applications for failover in a distributed environment. It shall be possible to load balance multiple AAA applications.		Yes
	80	All the xDRs (Any kind of data record) captured in the AAA application shall be replicated to a database in real-time for further processing.		
	81	AAA Shall be capable of authenticating through username/password, MAC Address or attributes part send via BNG as a part of Authentication Parameter and Provision as a part of subscriber profile.		Yes
	82	Shall support multiple protocols with support for RADIUS & DIAMETER (for Roaming), EAP (required in WLAN environment), RADIUS & DIAMETER Proxy (for settlement in multi-operator scenario), PAP (Password Authentication Protocol), CHAP (Challenge-Handshake Authentication Protocol) etc. to provide the services specified in this document.		
	83	AAA application needs to meet the access control, service delivery, and accounting requirements of service provider.		
	84	AAA shall interoperate with external AAA applications of other service providers and enterprise customers.		
	85	AAA shall integrate with proposed SPR for authentication, with existing billing system, and with existing provisioning system.		Yes

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	86	AAA shall provide the functionality of authentication against credentials stored in proposed SPR database. It shall also be possible to run any SQL query specified, for flexibility in retrieving information.		
	87	AAA shall be able to retrieve stored RADIUS/DIAMETER attributes and profiles from the SPR database to return to the network BNG access equipment.		
	88	AAA shall be able to authenticate remote users via proxy RADIUS/DIAMETER requests to AAA applications at other sites, which have the necessary database to perform authentication.		
	89	AAA shall include advanced proxy support. It shall be able to act as a proxy target application, and can forward proxy requests to other AAA applications. It shall be able to set up Proxy AAA user by:		
	89.1	Specifying a user-name suffix to indicate a proxy target		
	89.2	Configuring proxy by REALM		
	89.3	Directing incoming proxy requests to a specific authentication or accounting method based on user name suffix.		
	90	AAA Shall be possible for proxy AAA to maintain local copy of the accounting information as well as transferring it to remote AAA.		
	91	AAA Shall also provide proxy packet filtering. It shall use filtering to set up rules for handling packets that are forwarded to or received from target applications. This is needed in case if some packets which are coming from the AAA server sending RADIUS Proxy are not required.		
	92	In addition to support for proxy RADIUS, it shall offer:		
	92.1	Attribute translation capabilities		
	92.2	Flexible username format capabilities		
	92.3	Full SNMP v1/2 reporting of events related to fault and alarms on the proposed NMS/EMS system related to core		
	92.4	Delivery of QoS based on Differentiated Services and on Differentiated Application level		
	93	AAA shall allow configuration of user profiles to easily assign a set of connection attributes to a user or group of users. It shall also make it easy to standardize profiles across different types of network access equipment for delivering the appropriate level of service to all customers, regardless of which network access equipment they connect to.		
	94	It Shall be possible to query the AAA application to obtain users connection details, currently assigned IP address, session duration, Volume used etc.		Yes
	95	AAA Shall be possible to associate multiple IP address pools to a device to establish different address pools for different packages.		
	96	It shall also be possible to log accounting data directly to a single database or multiple databases.		

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	97	AAA Shall provide configuration for spooling accounting data from distributed AAA applications to a central billing system, thereby guaranteeing delivery in the event of a system failure.		
	98	AAA shall support IP-Pool Management and Resources Management.		Yes
	99	AAA Shall have provision to check for duplicate accounting records created due to retry mechanisms and multiple AAA applications in the network.		Yes
	100	AAA Shall be configurable from the GUI. It shall be possible to centrally manage all local and remote AAA applications centrally through Web-based GUI. Detailed Session and Event monitoring in real time shall be supported. It shall generate AAA server performance statistics in real time. It shall be possible to view the list of users currently logged along with the session duration.		Yes
	101	AAA Provision shall be available for restricting access based on a combination of duration, volume during the day; duration, volume during the week; duration, volume during the month; duration, volume during the year etc.		Yes
	102	AAA Shall have automated mechanism to verify abnormally disconnected sessions (for which session disconnection event is not received) and flush out session entries from memory in such cases to allow the user to log on again.		Yes
	103	AAA shall support IP address leasing both in dynamic way and in static way		
	104	AAA shall be used as an option to DHCP methodology as and when the main DHCP methodology is not found functioning or is down		
	105	AAA should be able to integrate with LI systems as per requirements		Yes
	106	AAA to support IPv4 & IPv6 and Dual Stack		Yes
	107	AAA should have capability to import Radius dictionary for different vendor NAS/BRAS/BNG models and also support web interface to create Radius response list.		
	108	AAA shall have High performance scripting engine to handle any kind of messaging change without affecting core node.		
	109	AAA Should have accounting message forwarding capability		
	110	Solution should have a web based EMS portal for operations management, customer care staff and technical team		
	111	EMS portal should have role based access to restrict access to different operations, screens to different set of users		Yes
	112	EMS portal should support audit trail functionality to trace all update operations performed by staff from login to logout.		Yes
	113	EMS portal should maintain customer operations history to track all operations performed on a customer account irrespective who performed it (operator, API).		Yes
	114	Should have inbuilt Radius simulator for radius test to be performed by customer care executives		
	115	AAA Shall have pre-integrated Business intelligence tool for supporting extensive business reporting requirements		
	116	AAA should be compliant with following 3GPP Standards:		Yes

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	116.1	3GPP Gy with Prepaid Charging		Yes
	116.2	3GPP SWx for integration with HSS for 4G Wi-Fi Offload		Yes
	116.3	SIGTRAN interface via MAP GW with HLR		Yes
	117	AAA Shall support SSL encryption in order to preserves the integrity of the Solution.		Yes
	118	AAA shall support staff password protection and lockout configuration.		Yes
	119	AAA Shall support Comprehensive, real-time Session Caching.		
	120	AAA shall support unique user session enforcement and session concurrency management.		
	121	AAA Shall handles multiple simultaneous sessions.		Yes
	122	AAA Shall provide a centralized location for subscriber data, including logon and session management parameters.		
	123	AAA Shall track usage in real-time to enforce session disconnect policies.		
	124	Solution should have functionality to enforce change of policy using Radius messaging like CoA and/or DM (RFC 5176).		
	125	AAA Should ensure efficient management of IPs in the event of network failure.		
	126	AAA should have emergency mode support to ensures seamless availability from such outages due to database connectivity issues.		
	127	AAA Shall support EAP-TLS, EAP-TTLS-MSCHAPv2, EAP-TTLS-CHAP, EAP-TTLS-PAP, EAP-AKA, EAP-AKA', EAP-SIM, EAP-FAST, EAP-PEAP/MSCHAPv2, EAP-PEAP/TLS, EAP State Machine according to RFC 4137 Authentication mechanisms.		
	128	AAA Supports different IP pools for multiple hosts and services.		
	129	AAA Shall have Overload protection mechanism.		Yes
	130	Proposed AAA should be Wireless Roaming Intermediary Exchange (WRIX) Compliant for interfacing with Roaming bridges.		Yes
B.1		Mobile Data Offload		
	1	AAA should support EAP-SIM based proxy forwarding or roaming support for Operators.		Yes
	2	Should support Modify/insert attribute during proxy request.		
	3	AAA should support IMSI based proxy forwarding.		Yes
	4	The System must support interfaces and logic for the scenario WiFi offload.		Yes
	5	Vendor shall support pre-integrated SIGTRAN stack supporting MAP gateway, which allows integration with mobile network elements such as HLR for 2G/3G Wi-Fi offload.		Yes
	6	Vendor shall support integration with HSS over SWx interface for 4G Wi-Fi offload.		Yes
B.2		Roaming Wi-Fi		
	1	Proposed solution shall support enabling subscriber roaming within different charge domains and geographic divisions.		Yes

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	2	Solution should support multi-operator, service specific roaming support including iPass®, Boingo®, etc.		Yes
	3	The proposed Backend shall be able to interoperate with global roaming partner database through WisPr XML method to allow user device to roam between carriers.		Yes
	4	The proposed system should have capability to record IPDRs of roaming partner and send it to the partner over FTP for settlement.		Yes
C		Log Monitoring		
	1	Log system for monitoring based on User details such as SOURCE IP, DESTINATION IP, PUBLIC IP, Device details including MAC Address, URL Logging, Flow Logs.		
	2	Easy to use Search Interface to Search the Logs if required.		
	3	NAT and Protocol based log monitoring.		
	4	The System shall provide GUI tools for user to enable/disable all logging (e.g. audit log, event log, error log, trace log, etc.) independently without causing any impact to the System performance (e.g. there will be no System interruption, etc.)		
	5	The System shall provide GUI tools for user to define log level according to severity (e.g. None, Low, Medium, High, etc.)		
	6	The System shall provide GUI tools for user to define log type (e.g. audit log, event log, trace log, administrator log, etc.)		
	7	The System shall provide the functionality to log user actions and entities related to these actions for the purpose of assisting System administrator to detect any violation has been done on the System.		
	8	The System shall provide the functionality to store historical information which are related to all EDRs processing written to database in audit log.		
	9	The System shall provide audit log for collection process with the following information:		
	9.1	original filename		
	9.2	collected file name		
	9.3	file created time stamp		
	9.4	the Network Element from which it was received		
	9.5	file size		
	9.6	total record of file		
	9.7	collected time (the time it was received).		
	10	The System shall provide audit log for distribution process with the following information:		
	10.1	file name		
	10.2	destination system host		
	10.3	distribution path		
	10.4	distribution start date time		
	10.5	distribution end date time		
	10.6	file size (e.g. before distribution and after distribution etc.)		
	10.7	total record of file		
	10.8	distribution status		
	11	The System shall provide event log which stores the following information related to job handling and events from the Mediation System background processes.		

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	11.1	Date & time of the logged event		
	11.2	The user associated with the event		
	11.3	The status of job of a particular event		
	11.4	The occurrence of an event		
	12	The System shall provide command log which stores the details of all user commands entered in GUI tools. For example: time, user id, etc.		
	13	The System shall provide housekeeping log for each entry that is removed from each file / backup from disk by using housekeeping process with the following information:		
	13.1	total file		
	13.2	total file size		
	13.3	creation date & time		
	13.4	status		
	13.5	percentage used before and after cleanup.		
	14	The System shall provide configuration log to log any data modification on configuration table or file as below:		
	14.1	Time		
	14.2	User ID		
	14.3	Event Description (Old value, New value)		
	15	The System shall provide the functionality to write log immediately (e.g. without storing details into memory database).		
	16	The System shall provide GUI tools for user to configure the interval of writing log when process is idle, also enable/disable the log.		
	17	The System shall provide the functionality to close each log file based on time limit, file size, etc.		
	18	The system must be able to accept Netflow data from Cisco routers, Cflowd from Juniper and Alcatel routers and Sflow data from Foundry or other Sflow based routers. The system must support Netflow versions 1, 3, 5, 7 or 9, Cflow versions 5, 9 and Sflow version 2, 4, 5 and IPFIX.		
	19	The solution must be able to collect up to 100k flows per second. The solution should be scalable to support 2500k Flows per second .		
	20	The system must be able to replicate (“tee”) received Netflow data and export it to other Netflow receivers in the network.		
	22	The collector should be able to function as a store and forward node. This is required when flows need to be aggregated per Internet Gateway and processed at a central location. This is also needed to ensure no logs are lost of the central log collection facilities at DC and DR This is also needed to ensure no logs are lost of the central log collection facilities become unreachable due to interconnect issues. Collector should be able to store the data for one day.		
	23	Each collector node should be able to inject IPFix/Netflow data from at least 100 network nodes.		
	24	The following RFCs should be supported the IPFix/Netflow nodes.		

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	24.1	RFC 7011 - Specification of the IP Flow Information Export (IPFIX/NETFLOW) Protocol for the Exchange of Flow Information.		
	24.2	RFC 6313 - Export of Structured Data in IP Flow Information Export (IPFIX/NETFLOW).		
	25	Collector Protocols. The collector shall be able to collect IPFix/Netflow data over the following protocols:		
	25.1	UDP		
	25.2	TCP		
	25.3	TCP with TLS 1.1 or better		
	25.4	SCTP		
	26	Multiple Collectors should be able to work as a cluster to share load from different exporters.		
	27	It should be possible to configure ACL (Access Control Lists) for collectors from the management UI.		
	28	Health statistics of each collector in the cluster should be available, and should measure at least the following:		
	28.1	Number of exporters concurrent (for UDP, a configurable timeout after which the exporter should not be counted as active)		
	28.2	Number of IPFix/Netflow records exported in that session		
	28.3	Number of IPFix/Netflow records not processed due to unknown template		
	28.4	Number of IPFix/Netflow records processed.		
	28.5	The system must be able to generate an alert due to a system error/over-load condition, e.g. process error, not getting flows and etc		
	29	Installation of the collector may be via CLI, however all management and operators of the collector shall be through WEB-GUI only.		
	30	Management Application		
	30.1	Application should be driven via a roles and rights managed system		
	30.2	Authentication of users shall be configurable and should support the following as a minimum:		
	30.2.1	Internal User lists.		
	30.2.2	It should be possible to define the password policy		
	30.2.3	External MySQL database table		
	30.2.4	External PostgreSQL database table		
	30.2.5	External LDAP server		
	30.2.6	External Active Directory		
	30.2.7	External RADIUS server		
	30.3	Management application should be able to manage stored data, it's archival, restore from archives and general information about it		
	31	Security – TLS mode		
	31.1	It should be possible to create a CA and issue certificates.		
	31.2	It should be possible to install public certificate of a CA to ensure only devices with certificates from trusted sources are accepted		
	32	Reports – Following analytics must be available		
	32.1	AS number source and destination matrix based on packets and bytes (volume of traffic)		

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	32.2	Top sources (IPv4 & IPv6) and top destinations (IPv4 & IPv6)		
	32.3	URLs, FQDNs from URLs		
	32.4	Top utilization by username		
	32.5	NAT Utilization Report		
	32.6	Ability to schedule report and FTP/Emailed		
	32.7	Trends and reports for volume of data stored, archived and available		
	33	High Availability		
	33.1	Data should be stored internally in format that is resilient to failure of storage nodes. An example of this is storing data in backend with concepts of shards and replica sets.		
	34	Data Search		
	34.1	Data should be searchable on all attributes present in the flows or any combination of attributes as sent by network devices .		
	34.2	Data should be searchable on all meta attributes of the flows such as AS numbers, zone the network device is installed in.		
	34.3	Since the quantum of data can get quite large, it should be possible to set searchable indexes per device, per day/hour		
	34.4	These search indexes should automatically be archived to reduce storage overhead and search scope.		
	34.5	It should be possible to use large file systems such as Hadoop's HDFS to move the archival data .		
	34.6	It should be possible to use large file systems such as Hadoop's HDFS to move indexes to for off-search-index storage. It should be possible to move such indexes back to searchable scope via admin GUI.		
	34.7	Data should be stored in JSON format. Data may be stored in binary format while it is being transmitted from store-and-forward node to main cluster.		
	34.8	It should be possible to move the archival data in JSON, binary,text and csv format for external HDFS/storage for archival. Data may be stored in binary format while it is being transmitted from store-and-forward node to main cluster.		
	34.9	Data should be searchable for NAT logs present in the flows as sent by network devices . The following fields MUST be searchable.		
	34.9.1	Source IP with Username (In case of Broadband User . Radius Accounting Logs should be integrated with searchable engine).		
	34.9.2	Source Port		
	34.9.3	Destination IP		
	34.9.4	Destination Port		
	34.9.5	NATed IP		
	34.9.6	NATed Port		
	34.9.7	Timestamp		
	34.9.8	Search shall be type specific.		
	34.9.9	IPv4/IPv6 address attributes, it should be possible to search by single IP or subnet		
	34.9.10	Text attributes: exact, substring, case sensitive and case non-sensitive		

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	35	Product Installation		
	35.1	It should be possible to install the product on dedicated servers		
	35.2	It should be possible to install the product on virtual machines		
	35.3	Product should be provided as docker images		
	36	APIs		
	36.1	All management functions should be usable via external API clients.		
	36.2	RESTful API should be provided		
C.1		Log Collectors		
	1	Collector shall be software based installable on virtualized environment which shall be hardened from operating system point of view.		Yes
	2	Collector shall support NetFlow, IPFix, FTP, sFTP, Web Services API, Direct DB Query and RADIUS protocols for collection purposes.		Yes
	3	Collector shall collect both NAT Logs and Usage IPDRs.		Yes
	4	Collector shall be capable to collect records from multiple network device		Yes
	5	Collector shall support IPv4, IPv6 and Dual Stack based NAT Records and Usage Records.		Yes
	6	Collector solution shall follow guideline provided by CGNAT Device supplier on the per session number Logging Records and treatment they provide for handling Ingress and Egress. E.g. on NetFlow this can be on single record. Bidders shall be responsible for integration of Gateway with collector at various locations.		Yes
	7	Collector should be in HA and if one fails then another should be able to automatically resume the collection process.		
	8	Collector Solution shall have its own fault and alarm management monitoring solution using which Dashboards can be accessed by NoC engineers. This monitoring system shall be installed at DC in active standby mode.		Yes
	9	The Proposed solution should have technologies to encrypt data at rest.		
	10	Should support In-Memory Data Processing		
	11	Bidder shall ensure logging time-zone compatibility.		
	12	Bidder shall ensure that there is no data loss during log forwarding.		Yes
	13	Bidder shall ensure that the Wifi Management solution shall run in DC-DR mode for forwarding the logs in both DC-DR simultaneously. In case of disaster, all logs at DC and DR should be in sync when system is restored.		Yes
	14	The system shall ensure log forwarding in TCP & UDP.		
C.2		Specification for Centralised Co-Relation Solution		
	1	Centralized Co-Relation solution shall be software based installable on virtualized environment which shall be hardened from operating system point of view		Yes
	2	Capacity of solution shall be as per the volumetric proposed on this tender document.		
	3	Centralized Co-Relation solution shall support SAN Storage connectivity.		Yes

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	4	Centralized Co-Relation solution shall store both NAT Logs and Usage IPDR, AAA logs and other logs as per DOT compliance.		Yes
	5	Data of all the sites shall be stored at the central DC location.		Yes
	6	Co-Relation Solution shall be able to enable search shall be available for below parameters		Yes
	6.1	Public IP with Time stamp		Yes
	6.2	Public IP and Port with Time stamp		Yes
	6.3	Public IP, Destination IP and Port with Time stamp		Yes
	6.4	MSISDN/Username/MAC ID with Time stamp		Yes
	6.5	MSISDN/Username/MAC ID and Destination IP with Time Stamp		Yes
	7	Co-Relation Solution shall be able to correlate NAT Create Record with NAT Delete Record and once NAT Record correlation done it shall correlate the obtained NAT record with relevant Usage Records for Usage information and Username/MSISDN/MAC ID for data services of BSNL including Broadband, Wi-Fi, FTTH and WiMAX services etc.		
	8	Co-Relation Solution enabled search shall support long duration search also		Yes
	8.1	24 hours search		Yes
	8.2	7 days search		Yes
	8.3	30 days search		Yes
	8.4	365 days search		
	9	Long duration search shall not impact any other ongoing search.		
	10	Co-Relation Solution shall support co-relation of multiple search triggers in bulk.		Yes
	11	Co-Relation Solution shall support IPv4, IPv6 and Dual IP support.		
	12	Centralized Co-Relation solution shall be capable of alerting, dashboard and reports on collected logs		
	13	Centralized Co-Relation Solution shall function as an On Demand Query solution where all logs would be stored in a proper unified format as per the supplier's software build and at the time of query the solution will fetch records and produce the results to show on the GUI.		
	14	Centralized Co-Relation solution shall support Run Time Correlation:		Yes
	14.1	Shall aggregate data from parsing and processing engine on the basis of search inputs (Public IP and Time Stamp)		Yes
	14.2	For Every search it correlates IP Address and time stamp with subscriber / IPDR details		Yes
	15	Centralized Co-Relation Solution shall store all information in normalized/unified form. Raw NAT logs shall be received from Collectors. These raw NAT logs shall be processed at the central location and would be converted into normalized/unified form by removing fields that are not needed. Once the NAT records are converted in normalized/unified format solution shall discard the raw NAT logs.		

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	16	Centralized Co-Relation Solution shall have features like log Filtration, Enrichment.		Yes
	17	Centralized Co-Relation Solution shall support both IPv4 and IPv6 as well as Dual Stack.		Yes
	18	Centralized Co-Relation Solution shall support co-relation where NAT LOG has source IP and Usage IPDRs will have pool of /64, Solution shall do co-relation of that single source IP to Usage IPDR Pool.		
	19	Centralized Co-Relation and overall solution shall meet below requirements from security point of view:		Yes
	19.1	Shall support secured File System.		Yes
	19.2	Shall support a unique feature of “write once read many”, once the data is entered; it shall not be edited or deleted for security concern.		Yes
	19.3	The LI or the operator shall not have access to the file structure stored in the servers.		Yes
	19.4	Shall support an intelligent file system that enables enhanced features for processed file to protect highly sensitive data and supports optimum storage capacity		
	20	Centralized Co-Relation solution must be capable of scaling in future if required through upgrade path		
	21	Centralized Co-Relation Solution shall have its own fault and alarm management monitoring solution using which Dashboards can be accessed by NoC engineers. This monitoring system shall be installed at DC in active standby mode.		
	22	The solution should be integrated with the existing WAG deployed at RailTel at various locations for data correlation, reporting etc.		Yes
	23	The Bidder shall be responsible for storing the Gateway logs along with the AAA and IPDR logs etc.		Yes
C.3		Specification for Centralised reports Solution		
	1	Reports solution shall be software based installable on virtualized environment which shall be hardened from operating system point of view.		Yes
	2	Reports solution shall support full text search for all collected logs		Yes
	3	Reports solution shall support customized reports as per requirement which can apart from standard reports.		Yes
	5	Reporting solution shall have Access Control List as a product feature.		Yes
	6	Reporting Module should allow access rights based on Circle (e.g. Kolkata TD/site staff should be able to search only Kolkata records and central level staff should be able to search all records from all circles/sites)		Yes
	7	Reports should be smarter and based on Public IP solution shall identify Circle and search in that circle.		Yes
	8	Long duration search, i.e., 24 hours and 7 days’ search should be supported.		Yes
	9	Log Duration search shall not impact performance for short duration or normal search (e.g. if someone put long duration search then it should go into async mode and with low priority, other normal search should get high priority).		Yes

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	10	Reports shall be DoT compliant.		Yes
	11	For MSISDN/Username search solution shall check its own circle as well other circle for Roaming information.		
	12	Reports Solution shall be able to initiate and shall support high priority based search. If any high priority request sent by Report Solution, it should search that request first.		Yes
	13	Reports Solution shall support tracking of processing time for each search request, i.e. Time from when the search request was triggered till search results are available on the browser.		Yes
	14	Reports solution GUI shall provide a method for input Queries to be sent for results processing.		
	15	Reports solution GUI shall provide a method for displaying the results of Queries		
	16	Reports solution GUI shall provide a method for downloading files of query results generated by the solution.		
	17	Reports solution GUI shall be implemented with user access control so that it is possible to limit which users have access to query the logging information.		Yes
	18	Reports solution GUI shall have the Reports Interface as GUI accessible from browser. Once end user enters search parameters, the server queries Processor and DB Server to receive result set on screen. This result set can be downloaded onto CSV, XLS, XML, PDF files on user's local machine. Once downloaded the Web form can be provided RESET to remove the result set from screen. This GUI shall be username / password based.		Yes
	19	Centralized Co-Relation Solution shall have its own fault and alarm management monitoring solution using which Dashboards can be accessed by NoC engineers. This monitoring system shall be installed at DC in active standby mode.		
	20	Reports solution GUI shall support below features on the Search GUI:		Yes
	20.1	Query Search: Minimalistic parameters used shall be Public IP and Time Stamp as inputs to perform search on the database or file system to obtain subscriber information.		Yes
	20.2	Advanced search: Username, MSISDN, MAC ID, IMSI and other subscriber details shall be used as input to fetch the IP details.		Yes
	20.3	Sliding Window: Search based on Time stamp by specifying the time limit (+-n) min/hrs to a specific time stamp (e.g. 10:00 am (+-) 15mins).		Yes
	20.4	There are various IPDR fields that shall be stored/added (e.g. Username, MSISDN, IMSI, IMEI, MAC ID, Prepaid/postpaid Flag etc.)		Yes
	21	The solution should have provision to execute & process multiple jobs/tasks/queries submitted from user concurrently.		Yes
D	CAPTIVE PORTAL			
	1	Supplier must provide a customizable captive portal for authentication of subscribers.		Yes

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	2	Authorization and authentication of subscribers should be possible via:		Yes
	2.1	Using identifiers of the SIM card		Yes
	2.2	SMS based OTP authentication		Yes
	2.3	Use of vouchers and cards purchased online		Yes
	2.4	Using vouchers cards purchased from a distributor		Yes
	3	The web portal should support following features:		Yes
	3.1	Support for RADIUS CoA		Yes
	3.2	Support for HTTP Post		
	4	Location based portals: Web Portal should be completely customized based on Location from which AP (or group of APSs) request is coming.		Yes
	5	Web portal should be compatible to all types of device's like small screen, Large screen, laptop, desktop, phones etc.		Yes
	6	Web portal should support SMSC integration via SMPP.		Yes
	7	Web portal should be able to send OTP via SMS to customers.		Yes
	8	SMS content should be configurable.		Yes
	9	There should be separate back end management engine to handle portal operations with user friendly GUI.		
	10	The portal shall have the ability to alter specific contents like text, logo using some editor.		Yes
	11	The Portal Management shall support a responsive web design that adapts the layout and orientation of the screen based on user-agents or browser being used.		Yes
	12	The Portal Management shall have the ability to configure the Workflow, e.g. Display Portal, Terms and Conditions, Survey etc.		
	13	The Portal solution shall support integration with Advertisement Server.		Yes
	14	The Portal solution shall have the ability to trigger notifications using SMS and email.		Yes
	15	The Portal solution shall support and properly render web contents to the following known internet browsers:		
	15.1	Internet Explorer		
	15.2	Google Chrome		Yes
	15.3	Safari		Yes
	15.4	Firefox		
	15.5	Opera		
	15.6	Android Browser		Yes
	16	The Portal solution shall provide space for Account status information, FAQs on self-care page.		
	17	The System should support the ability to:		Yes
	17.1	Using the MSISDN as a client ID (telephone number automatically becomes a Login)		Yes
	17.2	Providing service to customers of all MSISDNs		Yes
	17.3	Set a limit on the Numbering MSISDN (example: checking format "prefix 91 + 10 characters" to limit the operators in India). The digit length of mobile number should be flexible to adapt to prevailing digit length.		Yes
	17.4	The configuration of the logic of service depending on the operator MSISDN		Yes
	18	The System should support:		

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	18.1	Random and Automatic password generation during customer registration		Yes
	18.2	Adjustments format of passwords generated by customer (for example: the dimension of at least 8 characters, letters with the registry, numbers and special characters (# _ * -> <))		Yes
	19	The system should have support for integration with Payment gateway for online payment via credit or debit cards.		Yes
	20	The system should have capability to integrate with 3 rd Party PMS (Property Management System) system.		
	21	The system should have ability to automatically purge the inactive subscriber data.		Yes
	22	Portal should support Multiple options for Logout (i.e., URL Hit, Idle Time out etc.)		Yes
	23	System should support user session block on configurable failure attempts and unblock based on time duration		Yes
	24	System should support Automatic detection of Hotspot location and Landing to specific Portal Page.		Yes
	25	System should support configurable error messages for login and logout.		
	26	System shall support alerts messages and notifications via SMS for various Events (i.e. Login, Logout, Registration etc.).		
	27	System shall support Multi lingual SMS and portal.		Yes
	28	The Portal solution shall support multiple payment options for Wi-Fi Service purchase i.e.		
	28.1	Paper Voucher		
	28.2	Online Payment		
	29	System shall support Web based interface for Top up and Renewal using Voucher or Online payment.		Yes
	30	Captive Portal shall be provided by the Bidder through which users can Register, Login, procure/purchase the vouchers, Login with Broadband User account details and view their profile details after successful logins.		Yes
	31	System should have support for management of parent/child hierarchy where parent/child can use the same plan.		
	32	System shall support flexibility to create/manage child account under the parent user with individual quota management and usage reports.		
	33	Portal shall support notifications related to child account activities like registration, usage based etc.		
	34	The Portal solution should have support for Wi-Fi wallet i.e. Single Platform for multiple payment activities like recharge, renew plan etc.		Yes
	35	Portal Language would be Configurable based on Device locale, incase access network passes language information.		
	36	Should Support Forced Redirection of the User to the Registration Page.		
	37	Captive Portal shall be available for IPoE based logins where the users are redirected to this portal.		
	38	The Portals shall be customizable for static advertisements. User shall be able to change his password; shall be able to display the complete information on usage.		

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	39	Portals shall integrate seamlessly with existing Portal deployed, if required.		
	40	Proposed solution shall be able to push location based advertisements on the Captive Portal.		
	41	Relevant functionalities provided by proposed solution shall be available through API such that they can be utilized from the Mobile App level. E.g. Login, Logout, purchase of additional packages, vouchers etc.		
	42	The supplied captive portal shall be customizable with an editor tool by Admin with below features:		
	42.1	New Portal page design		
	42.2	Change/Add Logo and Text		
	42.3	Change/Add Message, Announcement		
	42.4	Change background color, Font, Field Box		
	43	Deployment of Location/Service aware Portal for Branding and Advertisement localization.		Yes
	44	Portal/SMS Notifications		
	44.1	Configurable Message format for SMS notifications as well as Error Messaging for Login and Logout		
	44.2	Multi lingual SMS / Email notification and WIP support		
	44.3	SMS and Web Based Self registration interface with support of KYC Norms (using One Time Password - OTP)		
	45	Smart detection of device type and Automatic landing to the device specific portal page.		
	46	Captive Portal should be WISPr compliant, allowing for seamless authentication from connection manager apps/SDK		
	47	Captive Portal should be highly customizable and should provide Web UI editor to change look & feel.		
	48	The Captive Portal should allow Social Media login for specific location and this should be configurable form the Web console of the proposed system.		Yes
	49	User shall be able to change his password; shall be able to display the complete information on usage.		Yes
D.1		Captive Portal Editor-		
	1	Captive Portal Design Editor - Administrators can manage the visual design and customize the look and feel of the captive portals for any given location.		Yes
	2	Should allow customizing elements which are common to all pages (welcome/success/ payment result/ AP out of service), will others will be specific.		
	3	Captive portal themes: Platform level administrators can upload themes to personalize the design of the captive portal(s).		
	4	The same editor should allow configuration to lock or allow override the Parent Node Captive Portal configuration by Child nodes in the defined hierarchy. For e.g. Primary Logo or Terms & Conditions defined by Parent node in the hierarchy cannot be changed by child nodes while secondary logo can be changed by child nodes in the hierarchy.		
E		WEB CONSOLE		

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	1	To access and configure all aspects of the Wi-Fi system like Users, Policies, Captive Portal, Product, Tariff, Logs etc.		Yes
	2	There is no limit to the number of Nodes and levels that can be created, and this unlimited configuration and customization granularity makes the service fully-adaptable.		
	3	Should provide a true multi-tenant and multi-hierarchy platform.		Yes
	4	Service Providers can onboard different customers and can manage end-2-end life cycle of customer independently.		Yes
	5	Wi-Fi Service Configuration-		
	5.1	Login Mode configuration: Administrators can enable and configure the desired login mode		Yes
	5.2	Standard login: In this scenario users access the service after providing login credentials for their account. Administrators can configure the data requested as part of the registration process (name, email, telephone number, address, etc.).		Yes
	5.2.1	For this scenario administrators can also choose to activate double validation (SMS verification) in which an additional step is included (an SMS code is sent to the device before allowing access to the service).		
	5.3	WISPr automatic login: Auto login is handled by Wireless Internet Service Provider roaming (WISPr) allowing users to connect users seamlessly and automatically.		
	5.3.1	WISPr compliant, allowing for seamless authentication from connection manager apps/SDK		
	5.4	Click to Connect: This access mode let users access the service without having to sign up or log in. All they must do is accept the service Terms and Conditions. For this scenario administrators can also choose to activate double validation (SMS verification) in which an additional step is included (an SMS code is sent to the device before allowing access to the service).		
	5.5	Social network login: WSMP allows end users to access the service by authenticating through a social network account (Facebook or Google). Preference will be given to system which allow toggle based enabling/disabling of social media login at a given location.		
F		Voucher Management System		
	1	The supplier shall provide voucher management system to create and recharge vouchers.		Yes
	2	The VoMS should support different voucher types like paper, electronic and pre-activated vouchers.		Yes
	3	The VoMS should allow smooth deployment of API's and architecture based on industry standards.		
	4	The VoMS should support:		Yes
	4.1	Individual and Batch voucher generation		Yes
	4.2	Recharge/Renewal and registration		Yes
	4.3	Encrypted voucher generation in case print detail file need to be sent to third party printing systems		Yes
	4.4	Detect and void duplicate voucher		Yes
	5	Voucher Format should be adjustable i.e.:		Yes

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	5.1	Prefix		Yes
	5.2	Length, Character set i.e. Numeric, Alphanumeric etc.		Yes
	6	VoMS shall support pre-registered vouchers		Yes
	7	VoMS should support diversified voucher and pin formats.		Yes
	8	VoMS shall support Prepaid Model wherein:		Yes
	8.1	Reseller/Agents can generate Vouchers from Portal within a given Credit limit.		Yes
	8.2	Reseller/Agents can purchase Vouchers using online payment gateway.		Yes
	9	System should support Voucher distribution of different denomination & plan using Thermal Printer, if required later		
G		PCRF Requirements		
	1	PCRF shall have the intelligence for policy enforcement. It shall integrate with BRAS/BNG/DPI/WAG over standard RADIUS or DIAMETER Gx to enforce the policies.		Yes
	2	It shall download the profile of users at the start of session from the SPR.		Yes
	3	It shall integrate with CAPTIVE PORTAL to change the current user session parameters e.g. speed.		Yes
	4	It shall also integrate with Billing system to check the account balance of users.		Yes
	5	It shall keep the usage history of users and present the same with account balance to users through CAPTIVE PORTAL.		Yes
	6	PCRF shall support multiple level of FUP policies to Subscriber Plans. It shall also be possible to implement FUP policy segregated on the group of customers based on customer ID with different dates of calendar month.		Yes
	7	PCRF shall support Push or Pull Mode for enforcement of policy to Sessions on BNG over RADIUS and Diameter.		Yes
	8	PCRF shall support Bandwidth on Demand, volume on demand, Time on demand to subscribers. Subscribers shall be able to choose BoD, VoD, ToD etc package from CAPTIVE PORTAL Portal. PCRF together with CAPTIVE PORTAL should be able to activate BoD, VoD, ToD etc. instantly or in scheduled time period.		Yes
	9	PCRF shall be communicating with multiple PCEF systems in its implementation to Enforce Policies over RADIUS protocol or DIAMETER Gx protocol.		Yes
	10	PCRF shall be able to communicate with DPI using Diameter Interface over Gx to enforce Policies on DPI.		Yes
	11	PCRF shall be able to communicate with different PCEF systems and shall be able to seamlessly communicate to avoid inter-operability issues on Diameter.		
	12	PCRF shall support Push and Pull Mode for enforcement of policy to Sessions on BNG and DPI over RADIUS and/or Diameter.		
	13	PCRF shall support Enforcement of Policy to L2 and L3 Components (like BNG/WAG).		
	14	PCRF shall support Multiple QoS towards PCEF (like BNG/WAG) for providing different services, multiple QoS per Users.		Yes
	15	PCRF shall be able to manage different quotas (usage metering).		Yes

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	16	PCRF shall provide Notifications to Subscribers via SMS.		Yes
	17	PCRF shall support Shared data bundles to share between different Subscribers.		Yes
	18	PCRF shall support to reset the Subscriber Usage Metering on customized billing cycle. E.g. on Monthly basis.		Yes
	19	PCRF shall support portal redirection/notified to subscribers for change of bandwidth speed for FUP scenarios through OTP based authentication.		Yes
	20	PCRF shall support Prepaid, Postpaid, Subscriber, Enterprise with different policies.		
	21	PCRF Provisioning interface shall include XML/SOAP/HTTP. These shall interface with CRM and other systems as required.		Yes
	22	PCRF shall support bulk provisioning of subscriber .		Yes
	23	PCRF shall be able to deny service authentication based on subscriber profile.		
	24	PCRF shall allow activating service offerings on real time basis on BNG, as and when the same is requested by the Subscriber.		
	25	PCRF shall track service usage, activates multiple service sessions simultaneously for a given user with a capability to track each session separately. It shall be possible to track all sessions of user to take CAC decision.		
	26	PCRF shall allow flexible accounting rules for user session based on the policy defined. It can be flat based, time based, etc.		Yes
	27	PCRF shall support both clientless and client (PPPoE) based login services.		Yes
	28	PCRF shall support both Post-paid and Pre-paid customer access.		
	29	PCRF shall support location specific content to the subscribers based on parameters like BNG hostname, interface name etc.		
	30	PCRF shall support protocols like DIAMETER OR WEBSERVICES (SOAP/REST) for Admission Control to be implemented along with the DPI OR Content Servers. Admission control mechanism shall ensure enough resources available for serving the request and allow service to be accessed after it reserves resources. If resources are not available, the service shall be denied to the user with the feedback to user.		
	31	PCRF shall support web based GUI for service definition and subscriber management, policies and store them in a central location.		Yes
	32	PCRF shall be deployed in N+N cluster configuration. PCRF fail over shall be seamless and shall not affect any subscriber active at that moment.		
	33	PCRF shall facilitate collection of usage-based statistics per subscriber.		

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	34	PCRF shall display the transaction details made by the customer like total number of bytes downloaded in a given period with other details like date, time etc with summary at the bottom for Internet Service & similar format for other services and correlate the same with the plan subscribed by the user so as to ensure that the same is within the permitted usage limit.		
	35	PCRF shall also be able to send notification messages to the customer as and when the user is in the verge of exceeding the usage limit. This limit shall be configurable like 60%, 70% etc.		Yes
	36	PCRF shall give Web Based GUI screen for the user to change his password and view his other personal information like usage details etc.		
	37	PCRF shall support the virtual partitioning of domain specific resources (interfaces to access subscriber profiles, authentication and accounting) to best support a wholesale model.		Yes
	38	PCRF shall allow OPERATOR to define new services, modify the existing one and even delete the offered services under authorized username and password.		Yes
	39	PCRF shall also allow the OPERATOR to define the set of services that will be available by default to all customers.		
	40	CAPTIVE PORTAL in conjunction with PCRF shall be able to dynamically update the changes based on the changes made in the profile like defining new service, modifying existing service and subscriber real time status like expiry of the balanced hour in case of pre-paid service.		
	41	PCRF shall provide session history, track sessions states and various stages of session set up, reasons for disconnect, retrains, connect speeds, receive speeds transmit speeds etc.		Yes
	42	Relevant functionalities provided by proposed solution shall be available through API such that they can be utilized from the existing OPERATOR APP level.		
	43	PCRF should be access agnostics and capable to work with any technology to support different authentication entity e.g. MAC, IMSI, USERNAME, IP etc.		Yes
	44	PCRF should be able to generate detail IPDR		Yes
	45	PCRF should also integrate and provide separate solution for reporting which uses this IPDR and any report can be generated out of it. There should be off the shelf report needs to be proposed but solution should allow to generate any no. of reports. The same report also need to be schedule periodically automatically.		
	46	The solution should have scalability to support N no. of subscribers. The supplier needs to give clarity on their horizontal scalability with subscriber distribution supported method.		
	47	PCRF should support fail over with no revenue leakage		Yes
	48	PCRF should support network spike with some algorithms; please specify the same in detail.		Yes
H		MONETIZATION		

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	1	Solution shall support Location based deals where the location specific promotional offers and deals will be displayed on captive portal and on Mobile App		Yes
	2	Solution shall support Location Specific Advertisement		Yes
	3	Solution shall support various reports like:		Yes
	3.1	Deals & Promotional related reports		Yes
	3.2	Advertisement reports		Yes
	3.3	Admin reports		Yes
	3.4	Publisher Reports		Yes
	3.5	Usage based reports		Yes
	3.6	Performance reports – Campaign wise, URL/Site wise, different Ad types, Application wise etc.		Yes
	4	Solution shall support various formats like flash, image, text, HTML for advertisement.		Yes
	5	Solution shall support multi – lingual for advertisement.		Yes
	6	Solution shall support Scheduled/On-demand report generation methods.		Yes
	7	Solution shall support Dashboard view.		Yes
I		MOBILE APP		
	1	Supplier must provide an Operator specific customized mobile application compatible with prominent Mobile OS & Browsers		Yes
	2	Client must support social media login like fb, google etc.		Yes
	3	Client should also enable login via creating mobile app specific account.		Yes
	4	Client should support of Automatic Wi-Fi detection and seamless connectivity.		Yes
	5	Client should support context aware advertisement, i.e. on the basis of subscribers' gender, age and marital status.		
	6	Client should support location indication on Google maps with location details.		Yes
	7	Client should support automatic Wi-Fi latching.		Yes
	8	Client should support Zero configuration and connects user automatically on the basis of pre-defined profile and default connection.		Yes
	9	Should support Location specific customized notifications for Wi-Fi availability.		Yes
	10	Should support Location based advertisements & deals.		Yes
	11	Should support Automatic and transparent sign on, Wi-Fi SSID prioritization.		Yes
	12	Client should support Toast Message Pop-ups for different operations.		
	13	Client should support Signal threshold configuration.		
	14	Client app must be made available with multi lingual support.		Yes
	15	Should exhibit Wi-Fi usage statistics for customer analysis.		Yes
	16	Client should support battery threshold configuration.		
	17	Client should support intelligent turn ON/OFF WiFi connection on the basis battery level, signal strength.		
	18	Should support dual SIM handset and device.		
	19	Client must support manual configuration of various parameters like battery level, Signal strength etc.		
	20	User should be able to deactivate automatic connection.		

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J		Analytics & Reporting		
	1	Advanced analytics tool which can show both Network and Business Analytics reports.		Yes
	2	It shall support location based analytics like location based visitors, hotspot based performance, highest applications accessed based on location etc.		Yes
	3	The tool shall support reports based on Mobile App, push notifications, deals and promotions.		
	4	The tool shall display reports based on graphs and charts and support of GUI.		Yes
	5	It shall support reports based on details of IP, URL browsed, MAC Address, Volume used, Bandwidth Utilization, Access Point Uptime Status, Client Connectivity Status, Application Wise Usage, Usage Graph, Data Sent and Received, Cluster wise (group wise APs) by usage, Location footfall and dwell time etc.		Yes
	6	System should integrate with access vendor Indoor location based system to generate heatmap based reporting, turn by turn direction and indoor map visibility reports.		
K		Prepaid Charging Requirements		
	1	The offered solution should support time based charging.		Yes
	2	The offered solution should support volume based charging i.e. charging based on usage or flat plans.		Yes
	3	The offered solution should support hybrid plan i.e. both time and volume based charging		Yes
	4	The offered solution should support FUP/QoS based plans.		Yes
	5	supplier shall support to transfer the IPDRs to any third party billing system in push/pull mode by open standard FTP/FTAM/SFTP etc.		Yes
L		Reseller Web Self-Care Portal		
	1	The supplier shall provide Reseller Web Interface with below features:		Yes
	1.1	Transactional information		Yes
	1.2	Package information		Yes
	1.3	Voucher Generation, Download and Search		Yes
	1.4	Real-Time Voucher generation and Printing for Over the Counter sales		Yes
	2	System shall have a User-friendly dashboard GUI for real-time voucher/plan statistics.		Yes
	3	System shall display revenue analytics and business trends reports like plan wise summary, voucher wise summary etc.		
	4	RWSC shall support Tracking account summary i.e. Credit Amount, Balance Amount.		Yes
	5	RWSC shall support generation of Password Protected Voucher batch file.		
	6	RWSC shall display Active user information i.e. IP, Username etc.		
	7	RWSC shall support subscriber creation via both plan and voucher from RWSC.		Yes
	8	RWSC shall support reseller password reset.		Yes

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	9	Solution to support Reports & Dashboards for giving detailed analysis of Resellers wrt plans sold, account details etc.		
M		Customer Web Self-Care Portal		
	1	Customer Self-Care interface should be designed in such a way that the functions delivered should meet most of the needs of a customer.		Yes
	2	Subscriber shall be able to retrieve Password in SMS (Forgot Password) using Web based self-care interface.		Yes
	3	Web self-care view shall be compatible to device type like smart phone, Tablets, laptops		Yes
	4	The portal should provide information like Usage based on subscriber package like		Yes
	4.1	Time/Volume		Yes
	4.2	Current balance available		Yes
	4.3	Subscriber Package Information		Yes
	4.4	Subscriber Billing / Payment Details		Yes
	4.5	Recharge/Renewal support		Yes
	5	The self-care portal should be capable of displaying:		Yes
	5.1	Transactional information		Yes
	5.2	Package information		Yes
	6	Customers should be able to book complaints based on defined drop down tabs.		Yes

6.6 Log Management SLAs – Annexure VI

Search Type	Normal Search Window	SLA	Long Duration Search Window	SLA
Flat NAT (Public IP, Private IP)	3 Hours	5 Min	3 Months	1 hour
Flat NAT (Destination IP)	1 Hour	5 Min	1 Day	30 min
Flat Usage (Private IP)	24 Hours	5 Min	12 Months	2 Hours
Flat Usage (MSISDN, IMSI)	3 Hours	5 Min	1 Day	30 min
Correlation Search (Public IP)	1 Hour	10 Min	3 Month	1 hour
Correlation Search (Private IP)	1 Hour	10 Min	1 Month	1 Hour
Correlation Search (Destination IP, MSISDN, IMSI)	1 Hour	10 Min	1 Day	1 hour
CIDR range search(subnet based) e.g. xxx.xxx.xxx.xxx/24	24 Hours	15 Min	12 Months	4 Hours
Port specific searches	24 Hours	15 Min	12 Months	4 Hours
Flat NAT (Public IP, DESTINATION IP)	3 Hours	5 Min	3 Months	1 hour
Destination Domain Specific Searches	24 Hours	15 Min	12 Months	4 Hours

6.7 Sizing – Annexure VII

Modules	S.No	Sizing Parameters	Values
A		General Requirements	
	1	The system shall be dimensioned for 300K concurrent Wi-Fi sessions.	300K

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	2	The system shall be dimensioned for additional 100K concurrent Fixed Broadband sessions apart from Wi-Fi.	100K
B		Log Management System	
	1	Log Compression.	75%
	2	Storage of NAT Logs for each collector site.	3 days
	3	Centralized Co-Relation solution shall store NAT Logs, AAA logs, other logs are required by DOT guidelines and Usage CDRs in compressed mode.	13 months online and 2 years offline.
	4	The Netflow/IPFIX collector should be provide at 5 locations in HA where gateways are deployed. Central storage should be provided by the bidder in 2 locations.	5 Collector sites
	5	Centralized Storage System would for Management application should be provided at DC and DR.	2 Correlation sites
	6	SAS Disks - minimum 12.0 Gbit/s or higher with atleast 10k RPM	
	7	Log collector should have separate handle for writing and reading simultaneously.	
	8	200 TB minimum usable storage with RAID 10 (DC 200TB , DR 200TB) with support for RAID controller with RAID 5,6 and 10.	
	9	Solution should be scalable to 600 TB minimum (DC, DR each)	
	10	Solution should support minimum 3 Lakh EPS (Events per second)	

6.8 WiFi network Management specs

6.8.1 General Specifications– Annexure VIII

General Specifications		
SN	1. Specifications description	Compliance FC/NC
1	Systems should be able to integrate with TACACS or RADIUS based authentication sever to define user level access	
2	The systems should have the ability to establish function-level, role-based permissions (e.g., who can use what functions of the product)	
3	The systems should support user based roles with different management privileges	
4	The systems shall support Single Sign-On(SSO) authentication	
5	The management system should have a Logging capability wrt to activities performed	
6	Alarm data retention: The retention of alarm data should be kept atleast 6 months	
7	The Fault Management should support upto 40 concurrent client sessions	
8	The Performance Management should support upto 25 concurrent client sessions	

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9	The System shall support local authentication	
10	To save the reports in excel, PDF, XML.	
2. Architecture		
11	All systems must be in DC-DR mode.	
12	The Primary must be in HA mode to avoid single point of failure.	
13	The DR solution should be able to take over the role of Active immediately & automatically, on the failure of the primary (DC/DR in Active-Active mode)	
14	T&D setup is required	
15	Collection Layer has to be seperated out from Processing and Presentation layers	
16	OS should not be open source	
17	DB should not be open source	
18	Systems would not have licenses related to users (named or concurrency)	
19	Please describe how your solution support Active-Active (Deduplication may be required but there is no data loss and failover is fast)	
20	Define the fail-over, high-availability architecture required at various layers - Collection layer, Processing layer, GUI layer; supported by your system	
21	N+1 for collection layer	
22	HA (active-active) is required for all higher layers, please provide detailed architecture and BOM	
3. Hardware		
23	Systems should be supplied with necessary hardware to run it as dedicated appliance and hardware & software should be tightly coupled with each other.	
24	Systems should be able to manage 50,000 devices from day 1.	
25	Fault & Perfoemance Mgmt systems should support Google Maps integration that help to centrally view all sites at the same time. Simple routine checkups of APs health on a site-by-site basis.	
26	The solution to support a web-based client for user and administrative functions.	
27	The solution provides Search capabilities - adhoc queries, save queries, user queries, role-based queries, shared/public queries	
28	Ability to configure the graphical user interface by using drag and drop for configuration & fields	
29	Ability to configure the graphical user interface based on individual, group or role-based preferences (colors, layout, etc.)	
30	Ability to support object-specific pop-up menus in the graphical user interface	

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31	Solution should support multi-tenancy with complete data isolation as well as with ability for analysts based on access rights to view data for one, two or more organizational units	
32	The tool should integrate with a directory system (LDAP) to enable recording and accessing user records of information	
4. Scope overview		
33	Solutioning	
34	User training	
35	Admin training	
36	O&M training	
37	Conduct of user workshop to arrive at requirements of NOC operations for implementation & customisation (if required)	
38	Conduct of user workshop to arrive at requirements of Network Planning for implementation & customisation (if required)	
39	I&C and Testing of Hw, DB, OS & Application	
40	Integration with Network & devices, for data collection	
41	Integration with Inventory Management system, for enrichment	
42	Integration with FM for Incident Management, for violations	
43	Self Certification before offering for UAT alongwith Test Reports	
44	Bug Fixing	
45	User Acceptance Testing	
46	Roll-out	

6.8.2 Sizing – Annexure IX

SIZING		
S.N.	Parameters	Remarks - 20 devices
1	Alarms	
	Esitimated No. of Alarms/day	1,045,000
	Estimated Alarm rate (alarms/sec)	
2	No. Of Reports/day	50
3	NBIs to be connected	
	No. Of EMS/NMSs	4
	No. Of IP devices to connected directly	20000
	Performance Management System (IP/ISP)	1
4	SBIs to be connected	
	TT system (two way integration)	1
5	Alarm data retention: The retention of raw alarms data should be kept for atleast 6 months	
6	15 min FM & PM Reports must have retention	6 months

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7	60 min Reports must have retention	12 months
8	Daily Reports must have retention	18 months
9	Monthly Reports must have retention	24 months

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7 List of Railway Stations to be covered under the project**7.1 List of Category – “C” Railway Stations**

S.No.	Name of Station/PoP	Railway zone	Stn./PoP Code	Division	State	Category
1	Adisaptagram	ER	ADST	HWH	West Bengal	C
2	Ambattur	SR	ABU	MAS	Tamilnadu	C
3	Ambikakalna	ER	ABKA	HWH	West Bengal	C
4	Annanur (Halt)	SR	ANNR	MAS	Tamilnadu	C
5	Anuppampattu (Flag)	SR	APB	MAS	Tamilnadu	C
6	Arts College	SCR	ATC	HYB	Andhra Pradesh	C
7	Asokenagar	ER	ASKR	SDAH	West Bengal	C
8	Atthipattu (Flag)	SR	AIP	MAS	Tamilnadu	C
9	Attipattupudunagar (Halt)	SR	AIPP	MAS	Tamilnadu	C
10	Avadi	SR	AVD	MAS	Tamilnadu	C
11	Badkulla	ER	BDZ	SDAH	West Bengal	C
12	Bagila	ER	BGF	HWH	West Bengal	C
13	Bahirkhanda	ER	BAHW	HWH	West Bengal	C
14	Bainchigram	ER	BCGM	HWH	West Bengal	C
15	Balarambati	ER	BLAE	HWH	West Bengal	C
16	Balichak	SER	BCK	KGP	West Bengal	C
17	Bally	ER	BLY	HWH	West Bengal	C
18	Ballygang Jn.	ER	BLN	SDAH	West Bengal	C
19	Bamangachi	ER	BMG	SDAH	West Bengal	C
20	Bangaon Jn.	ER	BNJ	SDAH	West Bengal	C
21	Barasat Jn	ER	BT	SDAH	West Bengal	C
22	Baruipara	ER	BRPA	HWH	West Bengal	C
23	Baruipur Jn	ER	BRP	SDAH	West Bengal	C
24	Basin Bridge Jn	SR	BBQ	MAS	Tamilnadu	C
25	Basuldanga	ER	BSD	SDAH	West Bengal	C
26	Bauria	SER	BVA	KGP	West Bengal	C
27	Binoy Badal Dinesh Bagh	ER	BBDB	SDAH	West Bengal	C
28	Begampur	ER	BPAE	HWH	West Bengal	C
29	Belanagar	ER	BZL	HWH	West Bengal	C
30	Belmuri	ER	BMAE	HWH	West Bengal	C
31	Bharath Nagar	SCR	BTNR	SC	Andhra Pradesh	C
32	Bhogpur	SER	BOP	KGP	West Bengal	C
33	Bidhannagar Road	ER	BNXR	SDAH	West Bengal	C

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34	Bidyadhar Pur	ER	BDYP	SDAH	West Bengal	C
35	Biman Bandar	ER	BNBA	SDAH	West Bengal	C
36	Bira	ER	BIRA	SDAH	West Bengal	C
37	Birnagar	ER	BIJ	SDAH	West Bengal	C
38	Birshibpur	SER	BSBP	KGP	West Bengal	C
39	Boinchi	ER	BOI	HWH	West Bengal	C
40	Borabanda	SCR	BRBD	SC	Andhra Pradesh	C
41	Brace-Bridge	ER	BRJ	SDAH	West Bengal	C
42	Canning	ER	CG	SDAH	West Bengal	C
43	Chakdaha	ER	CDH	SDAH	West Bengal	C
44	Champahati	ER	CHT	SDAH	West Bengal	C
45	Chanda Nagar	SCR	CDNR	SC	Andhra Pradesh	C
46	Chandanpur	ER	CDAE	HWH	West Bengal	C
47	Chandpara	ER	CDP	SDAH	West Bengal	C
48	Chengail	SER	CGA	KGP	West Bengal	C
49	Chennai Beach	SR	MSB	MAS	Tamilnadu	C
50	Chennai Chetpet (Flag)	SR	MSC	MAS	Tamilnadu	C
51	Chennai Fort(Flag)	SR	MSF	MAS	Tamilnadu	C
52	Chennai Park	SR	MPK	MAS	Tamilnadu	C
53	Chepauk	SR	MCPK	MAS	Tamilnadu	C
54	Chintaripet	SR	MCPT	MAS	Tamilnadu	C
55	Chrompet (Flag)	SR	CMP	MAS	Tamilnadu	C
56	Dabirpura	SCR	DQR	HYB	Andhra Pradesh	C
57	Dakshin Durgapur	ER	DKDP	SDAH	West Bengal	C
58	Dankuni	ER	DKAE	HWH	West Bengal	C
59	Debipur	ER	DBP	HWH	West Bengal	C
60	Deula	ER	D	SDAH	West Bengal	C
61	Deulti	SER	DTE	KGP	West Bengal	C
62	Dhamuah	ER	DMU	SDAH	West Bengal	C
63	Diamond Harbour Rd	ER	DH	SDAH	West Bengal	C
64	Dumdum Jn	ER	DDJ	SDAH	West Bengal	C
65	Duttapukur	ER	DTK	SDAH	West Bengal	C
66	Egattur(Halt)	SR	EGT	MAS	Tamilnadu	C
67	Ennore	SR	ENR	MAS	Tamilnadu	C
68	Falaknuma	SCR	FM	HYB	Andhra Pradesh	C
69	Fathenagar Bridge	SCR	FNB	SC	Andhra Pradesh	C

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70	Fuleswar	SER	FLR	KGP	West Bengal	C
71	Gangpur	ER	GRP	HWH	West Bengal	C
72	Garifa	ER	GFAE	HWH	West Bengal	C
73	Ghutiarisharif	ER	GOF	SDAH	West Bengal	C
74	Gobordanga	ER	GBG	SDAH	West Bengal	C
75	Gobra	ER	GBRA	HWH	West Bengal	C
76	Gocharan	ER	GCN	SDAH	West Bengal	C
77	Greenways Road(Flag)	SR	GWYR	MAS	Tamilnadu	C
78	Agradwip	ER	AGAE	HWH	West Bengal	C
79	Baghnapura	ER	BGRA	HWH	West Bengal	C
80	Guindy	SR	GDY	MAS	Tamilnadu	C
81	Baidyabati	ER	BBAE	HWH	West Bengal	C
82	Balagarh	ER	BGAE	HWH	West Bengal	C
83	Bansbaria	ER	BSAE	HWH	West Bengal	C
84	Guma	ER	GUMA	SDAH	West Bengal	C
85	Gummidipundi	SR	GPD	MAS	Tamilnadu	C
86	Behula	ER	BHLA	HWH	West Bengal	C
87	Belurhat	ER	BQY	HWH	West Bengal	C
88	Belur	ER	BEQ	HWH	West Bengal	C
89	Belur Math	ER	BRMH	HWH	West Bengal	C
90	Bhadreswar	ER	BHR	HWH	West Bengal	C
91	Bhandertikuri	ER	BFZ	HWH	West Bengal	C
92	Gurap	ER	GRAE	HWH	West Bengal	C
93	Gurudasnagar	ER	GURN	SDAH	West Bengal	C
94	Chandannagar	ER	CGR	HWH	West Bengal	C
95	Habra	ER	HB	SDAH	West Bengal	C
96	Chuchura	ER	CNS	HWH	West Bengal	C
97	Hafizpeta	SCR	HFZ	SC	Andhra Pradesh	C
98	Dainhat	ER	DHAE	HWH	West Bengal	C
99	Dearah	ER	DEH	HWH	West Bengal	C
100	Halisahar	ER	HLR	SDAH	West Bengal	C
101	Dhatrigram	ER	DTAE	HWH	West Bengal	C
102	Dumurdaha	ER	DMLE	HWH	West Bengal	C
103	Guptipara	ER	GPAE	HWH	West Bengal	C
104	Hindmotor	ER	HMZ	HWH	West Bengal	C
105	Hooghlyghat	ER	HYG	HWH	West Bengal	C
106	Jirat	ER	JIT	HWH	West Bengal	C
107	Haripal	ER	HPL	HWH	West Bengal	C
108	Kalinagar	ER	KLNT	HWH	West Bengal	C
109	Khamargachi	ER	KMAE	HWH	West Bengal	C
110	Konnagar	ER	KOG	HWH	West Bengal	C
111	Kuntighat	ER	KJU	HWH	West Bengal	C
112	Laxkshipur	ER	LKX	HWH	West Bengal	C

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113	Mankundu	ER	MUU	HWH	West Bengal	C
114	Patuli	ER	PTAE	HWH	West Bengal	C
115	Purbasthali	ER	PSAE	HWH	West Bengal	C
116	Haur	SER	HAUR	KGP	West Bengal	C
117	Hazigarh	ER	HIH	HWH	West Bengal	C
118	Rishra	ER	RIS	HWH	West Bengal	C
119	Samudragarh	ER	SMAE	HWH	West Bengal	C
120	Somrabazar	ER	SOAE	HWH	West Bengal	C
121	Hindu College(Halt)	SR	HC	MAS	Tamilnadu	C
122	Hi-Tech City	SCR	HTCY	SC	Andhra Pradesh	C
123	Tribeni	ER	TBAE	HWH	West Bengal	C
124	Uttarpara	ER	UPA	HWH	West Bengal	C
125	Hooghly	ER	HGY	HWH	West Bengal	C
126	Hotor	ER	HT	SDAH	West Bengal	C
127	Huppuguda	SCR	HPG	HYB	Andhra Pradesh	C
128	Indiranagar (Flag)	SR	INDR	MAS	Tamilnadu	C
129	Bagbazar	ER	BBR	SDAH	West Bengal	C
130	Burrabazar	ER	BZB	SDAH	West Bengal	C
131	Agarpara	ER	AGP	SDAH	West Bengal	C
132	Akra	ER	AQR	SDAH	West Bengal	C
133	Jamai Osmania	SCR	JOO	HYB	Andhra Pradesh	C
134	Aranghata	ER	AG	SDAH	West Bengal	C
135	James Street	SCR	JET	SC	Andhra Pradesh	C
136	Baghajatin	ER	BGJT	SDAH	West Bengal	C
137	Bagula	ER	BGL	SDAH	West Bengal	C
138	Tala	ER	TALA	SDAH	West Bengal	C
139	Baharu	ER	BARU	SDAH	West Bengal	C
140	Ballyghat	ER	BLYG	SDAH	West Bengal	C
141	Janai Road	ER	JOX	HWH	West Bengal	C
142	Banpur	ER	BPN	SDAH	West Bengal	C
143	Baranagar	ER	BARN	SDAH	West Bengal	C
144	Barrackpore	ER	BP	SDAH	West Bengal	C
145	Basirhat	ER	BSHT	SDAH	West Bengal	C
146	Belgharia	ER	BLH	SDAH	West Bengal	C
147	Bhasila	ER	BSLA	SDAH	West Bengal	C
148	Birati	ER	BBT	SDAH	West Bengal	C
149	Bisorepara Kotalia	ER	BRPK	SDAH	West Bengal	C
150	Jaugram	ER	JRAE	HWH	West Bengal	C
151	Budgebudge	ER	BGB	SDAH	West Bengal	C
152	Champa Pukur	ER	CQR	SDAH	West Bengal	C
153	Dakhineswar	ER	DAKE	SDAH	West Bengal	C

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154	Dakshin Barasat	ER	DBT	SDAH	West Bengal	C
155	Dhakuria	ER	DHK	SDAH	West Bengal	C
156	Dhaphdhopi	ER	DPDP	SDAH	West Bengal	C
157	Dumdum Cantt.	ER	DDC	SDAH	West Bengal	C
158	Durganagar	ER	DGNR	SDAH	West Bengal	C
159	Eden Garden	ER	EDG	SDAH	West Bengal	C
160	Jhapandanga	ER	JPQ	HWH	West Bengal	C
161	Gangnapur	ER	GGP	SDAH	West Bengal	C
162	Garia	ER	GIA	SDAH	West Bengal	C
163	Gede	ER	GXD	SDAH	West Bengal	C
164	Gopalnagar	ER	GN	SDAH	West Bengal	C
165	Habibpur	ER	HBE	SDAH	West Bengal	C
166	Harua Road	ER	HRO	SDAH	West Bengal	C
167	Hasnabad	ER	HNB	SDAH	West Bengal	C
168	Hridaypur	ER	HHR	SDAH	West Bengal	C
169	Ichhapur	ER	IP	SDAH	West Bengal	C
170	Jadavpur	ER	JDP	SDAH	West Bengal	C
171	Jagaddal	ER	JGDL	SDAH	West Bengal	C
172	Joynagar Mojilpur	ER	JNM	SDAH	West Bengal	C
173	Kankinara	ER	KNR	SDAH	West Bengal	C
174	Kashinagar Halt	ER	KHGR	SDAH	West Bengal	C
175	Khardah	ER	KDH	SDAH	West Bengal	C
176	Kadambattur	SR	KBT	MAS	Tamilnadu	C
177	Lake Garden	ER	LKF	SDAH	West Bengal	C
178	Kaikala	ER	KKAE	HWH	West Bengal	C
179	Madhyamgram	ER	MMG	SDAH	West Bengal	C
180	Majhdia	ER	MIJ	SDAH	West Bengal	C
181	Kakdwip	ER	KWDP	SDAH	West Bengal	C
182	Majher Gram	ER	MAJ	SDAH	West Bengal	C
183	Malatipur	ER	MPE	SDAH	West Bengal	C
184	Gokulnagar Joypur	ER	GNJP	HWH	West Bengal	C
185	Mallikpur	ER	MAK	SDAH	West Bengal	C
186	Mathurapur Rd	ER	MPRD	SDAH	West Bengal	C
187	Kalikapur	ER	KLKR	SDAH	West Bengal	C
188	Kalinarayanpur Jn.	ER	KLNP	SDAH	West Bengal	C
189	Namkhana	ER	NAMKA	SDAH	West Bengal	C
190	New Alipore	ER	NACC	SDAH	West Bengal	C
191	Newbarakpore	ER	NBE	SDAH	West Bengal	C
192	Kalyani	ER	KYI	SDAH	West Bengal	C
193	Kalyani Ghoshpara	ER	KLYG	SDAH	West Bengal	C
194	Kalyani Silpanchal	ER	KLYS	SDAH	West Bengal	C
195	Kalyani Simanta	ER	KLYM	SDAH	West Bengal	C
196	Kalyanpur	ER	KYP	SDAH	West Bengal	C
197	Nischindipur	ER	NCP	SDAH	West Bengal	C

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198	Nungi	ER	NAI	SDAH	West Bengal	C
199	Palta	ER	PTF	SDAH	West Bengal	C
200	Parkcircus	ER	PQS	SDAH	West Bengal	C
201	Patipukur	ER	PTKR	SDAH	West Bengal	C
202	Phulia	ER	FLU	SDAH	West Bengal	C
203	Kanchrapara	ER	KPA	SDAH	West Bengal	C
204	Princepghat	ER	PPGT	SDAH	West Bengal	C
205	Ranaghat	ER	RHA	SDAH	West Bengal	C
206	Santoshpur	ER	SSP	SDAH	West Bengal	C
207	Shashanroad	ER	SSRD	SDAH	West Bengal	C
208	Shyamnagar	ER	SNR	SDAH	West Bengal	C
209	Sodpur	ER	SEP	SDAH	West Bengal	C
210	Sondalia	ER	SXC	SDAH	West Bengal	C
211	Subhasgram	ER	SBGR	SDAH	West Bengal	C
212	Surjyapur	ER	SJPR	SDAH	West Bengal	C
213	Takiroad	ER	TKF	SDAH	West Bengal	C
214	Titagarh	ER	TGH	SDAH	West Bengal	C
215	Tollygange	ER	TLG	SDAH	West Bengal	C
216	Belgachia	Metro	KBEL	NA	West Bengal	C
217	Central	Metro	KCEN	NA	West Bengal	C
218	Chandni Chowk	Metro	KCWC	NA	West Bengal	C
219	Dum Dum	Metro	KDMI	NA	West Bengal	C
220	Esplanade	Metro	KESP	NA	West Bengal	C
221	Gitanjali	Metro	KGTN	NA	West Bengal	C
222	Grishpark	Metro	KGPK	NA	West Bengal	C
223	Jatindas Park	Metro	KJPK	NA	West Bengal	C
224	Kalighat	Metro	KKHG	NA	West Bengal	C
225	Kavi Nazrul	Metro	KKNZ	NA	West Bengal	C
226	Kavi Subhash	Metro	KKVS	NA	West Bengal	C
227	Mahanayak Uttam Kumar	Metro	KMUK	NA	West Bengal	C
228	Mahatma Gandhi Road	Metro	KMHR	NA	West Bengal	C
229	Maidan	Metro	KMDI	NA	West Bengal	C
230	Mastarda Suryasen	Metro	KMSN	NA	West Bengal	C
231	Kasturibanagar(Flag)	SR	KTBR	MAS	Tamilnadu	C
232	Netaji	Metro	KNTJ	NA	West Bengal	C
233	Netaji Bhavan	Metro	KNBN	NA	West Bengal	C
234	Parkstreet	Metro	KPSK	NA	West Bengal	C
235	Kathivakkam(Flag)	SR	KAVM	MAS	Tamilnadu	C
236	Rabindra Sadan	Metro	KRSD	NA	West Bengal	C
237	Rabindra Sarovar	Metro	KRSB	NA	West Bengal	C
238	Sahid Khudiram	Metro	KSKD	NA	West Bengal	C
239	Katwa	ER	KWAE	HWH	West Bengal	C
240	Shyambazar	Metro	KSHY	NA	West Bengal	C
241	Sovabazar Sutanuti	Metro	KSHO	NA	West Bengal	C
242	Kavaripettai	SR	KVP	MAS	Tamilnadu	C

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243	Khairatabad	SCR	KQD	SC	Andhra Pradesh	C
244	Khanyan	ER	KHN	HWH	West Bengal	C
245	Khirai	SER	KHAI	KGP	West Bengal	C
246	Kodambakkam	SR	MKK	MAS	Tamilnadu	C
247	Kolaghat	SER	KIG	KGP	West Bengal	C
248	Korattur(Flag)	SR	KOTR	MAS	Tamilnadu	C
249	Korukkupet	SR	KOK	MAS	Tamilnadu	C
250	Kotturpuram(Flag)	SR	KTPM	MAS	Tamilnadu	C
251	Krishnanagar City	ER	KNJ	SDAH	West Bengal	C
252	Kulgachia	SER	KGy	KGP	West Bengal	C
253	Lakdikapul	SCR	LKPL	SC	Andhra Pradesh	C
254	Lakshmi Kantapur	ER	LKPR	SDAH	West Bengal	C
255	Light House(Flag)	SR	MLHS	MAS	Tamilnadu	C
256	Lilluah	ER	LLH	HWH	West Bengal	C
257	Loknath	ER	LOK	HWH	West Bengal	C
258	Madanpur	ER	MPJ	SDAH	West Bengal	C
259	Madhusudhanpur	ER	MDSE	HWH	West Bengal	C
260	Magrahat	ER	MGT	SDAH	West Bengal	C
261	Majher Hat	ER	MJT	SDAH	West Bengal	C
262	Malakpet	SCR	MXT	HYB	Andhra Pradesh	C
263	Manavur(Flag)	SR	MAF	MAS	Tamilnadu	C
264	Mandaiveli(Flag)	SR	MNDY	MAS	Tamilnadu	C
265	Masagram	ER	MSAE	HWH	West Bengal	C
266	Maslandapur	ER	MSL	SDAH	West Bengal	C
267	Mecheda	SER	MCA	KGP	West Bengal	C
268	Meenambakkam	SR	MN	MAS	Tamilnadu	C
269	Memari	ER	MYM	HWH	West Bengal	C
270	Minjur	SR	MJR	MAS	Tamilnadu	C
271	Mirzapur Bankipur	ER	MBE	HWH	West Bengal	C
272	Mogra	ER	MUG	HWH	West Bengal	C
273	Mosur(Halt)	SR	MSU	MAS	Tamilnadu	C
274	Nabadwipdham	ER	NDAE	HWH	West Bengal	C
275	Nabagram	ER	NBAE	HWH	West Bengal	C
276	Nalikul	ER	NKL	HWH	West Bengal	C
277	Nalpur	SER	NALR	KGP	West Bengal	C
278	Nandiyambakkam(Halt)	SR	NPKM	MAS	Tamilnadu	C

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279	Nasibpur	ER	NSF	HWH	West Bengal	C
280	Nature Cure Hospital	SCR	NCHS	SC	Andhra Pradesh	C
281	Necklace Road	SCR	NLRD	SC	Andhra Pradesh	C
282	Nemilicherry(Halt)	SR	NEC	MAS	Tamilnadu	C
283	Netra	ER	NTA	SDAH	West Bengal	C
284	Nungambakkam (Flag)	SR	NBK	MAS	Tamilnadu	C
285	Pallaroad	ER	PRAE	HWH	West Bengal	C
286	Pallavaram	SR	PV	MAS	Tamilnadu	C
287	Palpara	ER	PXR	SDAH	West Bengal	C
288	Palsit	ER	PLAE	HWH	West Bengal	C
289	Panduah	ER	PDA	HWH	West Bengal	C
290	Park Town(Flag)	SR	MPKT	MAS	Tamilnadu	C
291	Pattabiram(Flag)	SR	PAB	MAS	Tamilnadu	C
292	Patravakkam(Flag)	SR	PVM	MAS	Tamilnadu	C
293	Payradanga	ER	PDX	SDAH	West Bengal	C
294	Pazhavanthangal (Flag)	SR	PZA	MAS	Tamilnadu	C
295	Perambur Carriage Works (Flag)	SR	PCW	MAS	Tamilnadu	C
296	Perambur Loco Works (Flag)	SR	PEW	MAS	Tamilnadu	C
297	Perungudi	SR	PRGD	MAS	Tamilnadu	C
298	Piali	ER	PLF	SDAH	West Bengal	C
299	Ponneri	SR	PON	MAS	Tamilnadu	C
300	Porabazar	ER	PBZ	HWH	West Bengal	C
301	Puliamanagalam(Halt)	SR	PLMG	MAS	Tamilnadu	C
302	Putlur (Halt)	SR	PTLR	MAS	Tamilnadu	C
303	Radhamohanpur	SER	RDU	KGP	West Bengal	C
304	Ramrajatala	SER	RMJ	KGP	West Bengal	C
305	Rasulpur	ER	RSLR	HWH	West Bengal	C
306	Royapuram(Halt)	SR	RPM	MAS	Tamilnadu	C
307	Saidapet	SR	SP	MAS	Tamilnadu	C
308	Saktigarh	ER	SKG	HWH	West Bengal	C
309	Sangrampur	ER	SNU	SDAH	West Bengal	C
310	Sanjeevaiah Park	SCR	SJVP	SC	Andhra Pradesh	C
311	Santragachi	SER	SRC	KGP	West Bengal	C

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312	Abada	SER	ABB	KGP	West Bengal	C
313	Andul	SER	ADL	KGP	West Bengal	C
314	Bagnan	SER	BZN	KGP	West Bengal	C
315	Dasnagar	SER	DSNR	KGP	West Bengal	C
316	Senjipanampakkam(Halt)	SR	SPAM	MAS	Tamilnadu	C
317	Ghoraghata	SER	GGTA	KGP	West Bengal	C
318	Sevvapet Road	SR	SVR	MAS	Tamilnadu	C
319	Shantipur	ER	STB	SDAH	West Bengal	C
320	Sheoraphuli	ER	SHE	HWH	West Bengal	C
321	Mourigram	SER	MRGM	KGP	West Bengal	C
322	Nandaigajan	SER	NDGJ	KGP	West Bengal	C
323	Shibaichandi	ER	SHBC	HWH	West Bengal	C
324	Narayan Pakuria Murail	SER	NPMR	KGP	West Bengal	C
325	Panskura	SER	PKU	KGP	West Bengal	C
326	Sankrail	SER	SEL	KGP	West Bengal	C
327	Tikiapara	SER	TPKR	KGP	West Bengal	C
328	Simlagarh	ER	SLG	HWH	West Bengal	C
329	Simurali	ER	SMX	SDAH	West Bengal	C
330	E-Depot	SR	EDEP	MAS	Tamilnadu	C
331	Moore Market Complex	SR	MMC1	MAS	Tamilnadu	C
332	Pattabiram Military Siding(Flag)	SR	PTMS	MAS	Tamilnadu	C
333	Singur	ER	SIU	HWH	West Bengal	C
334	Sitaphalmandi	SCR	STPD	HYB	Andhra Pradesh	C
335	Sonarpur	ER	SPR	SDAH	West Bengal	C
336	Srirampur	ER	SRP	HWH	West Bengal	C
337	St. Thomasmount	SR	STM	MAS	Tamilnadu	C
338	Taherpur	ER	THP	SDAH	West Bengal	C
339	Talandoo	ER	TLO	HWH	West Bengal	C
340	Taldi	ER	TLX	SDAH	West Bengal	C
341	Tambaram Sanitorium (Flag)	SR	TBMS	MAS	Tamilnadu	C
342	Tarakeswar	ER	TAK	HWH	West Bengal	C
343	Taramani	SR	TRMN	MAS	Tamilnadu	C

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344	Thakurnagar	ER	TKNR	SDAH	West Bengal	C
345	Thirumullaivoil (Halt)	SR	TMVL	MAS	Tamilnadu	C
346	Thirunintravur	SR	TI	MAS	Tamilnadu	C
347	Tirumayilai	SR	MTMY	MAS	Tamilnadu	C
348	Tirusulam(Flag)	SR	TLM	MAS	Tamilnadu	C
349	Tiruvalangadu	SR	TO	MAS	Tamilnadu	C
350	Tiruvallikeni(Flag)	SR	MTCN	MAS	Tamilnadu	C
351	Tiruvanmiyur	SR	TYMR	MAS	Tamilnadu	C
352	Tiruvottiyur	SR	TVT	MAS	Tamilnadu	C
353	Tondiarpet(Flag)	SR	TNP	MAS	Tamilnadu	C
354	Uluberia	SER	ULB	KGP	West Bengal	C
355	Velacheri	SR	VLCY	MAS	Tamilnadu	C
356	Veppambattu (Flag)	SR	VEU	MAS	Tamilnadu	C
357	Vidya Nagar	SCR	VAR	HYB	Andhra Pradesh	C
358	Villivakkam	SR	VLK	MAS	Tamilnadu	C
359	Voc Nagar(Halt)	SR	VOC	MAS	Tamilnadu	C
360	Vyasarpadi Jeeva (Flag)	SR	VJM	MAS	Tamilnadu	C
361	Washermanpet	SR	WST	MAS	Tamilnadu	C
362	Wimco Nagar(Flag)	SR	WCN	MAS	Tamilnadu	C
363	Yakutpura	SCR	YKA	HYB	Andhra Pradesh	C

7.2 List of C- Category stations with commissioned Wi-Fi service

S.No.	Name of Station/PoP	Railway	Stn./PoP Code	Division	State	Category
1	Airoli	CR	AIRL	BB	Maharashtra	C
2	Akurdi	CR	AKRD	PA	Maharashtra	C
3	Ambernath	CR	ABH	BB	Maharashtra	C
4	Ambivli	CR	ABY	BB	Maharashtra	C
5	Asangaon	CR	ASO	BB	Maharashtra	C
6	Atgaon	CR	ATG	BB	Maharashtra	C
7	Begdewadi	CR	BGWI	PA	Maharashtra	C
8	Bhandup	CR	BND	BB	Maharashtra	C
9	Bhivpuri Road	CR	BVS	BB	Maharashtra	C
10	Boisar	WR	BOR	BCT	Maharashtra	C
11	Charni Road	WR	CYR	BCT	Maharashtra	C
12	Chinchpokli	CR	CHG	BB	Maharashtra	C
13	Chinchwad	CR	CCH	PA	Maharashtra	C
14	Chunnabhatti	CR	CHF	BB	Maharashtra	C
15	Cotton Green	CR	CTGN	BB	Maharashtra	C

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16	Currey Road	CR	CRD	BB	Maharashtra	C
17	Dahanu Road	WR	DRD	BCT	Maharashtra	C
18	Dahisar	WR	DIC	BCT	Maharashtra	C
19	Dapodi	CR	DAPD	PA	Maharashtra	C
20	Dehu Road	CR	DEHR	PA	Maharashtra	C
21	Diwa	CR	DW	BB	Maharashtra	C
22	Dock Yard Rd	CR	DKRD	BB	Maharashtra	C
23	Dolavli	CR	DLV	BB	Maharashtra	C
24	Elphinstone Rd	WR	EPR	BCT	Maharashtra	C
25	Ghansoli	CR	GNSL	BB	Maharashtra	C
26	Ghorawadi	CR	GRWD	PA	Maharashtra	C
27	Goregaon	WR	GMN	BCT	Maharashtra	C
28	Govandi	CR	GV	BB	Maharashtra	C
29	Grant Road	WR	GTR	BCT	Maharashtra	C
30	Guru Teg Bahadur Nagar	CR	GTBN	BB	Maharashtra	C
31	Jogeshwari	WR	JOS	BCT	Maharashtra	C
32	Juinagar	CR	JNJ	BB	Maharashtra	C
33	Kalva	CR	KLVA	BB	Maharashtra	C
34	Kamshet	CR	KMST	PA	Maharashtra	C
35	Kandivli	WR	KILE	BCT	Maharashtra	C
36	Kanjurmarg	CR	KJMG	BB	Maharashtra	C
37	Karjat	CR	KJT	BB	Maharashtra	C
38	Kasara	CR	KSRA	BB	Maharashtra	C
39	Kasarwadi	CR	KSWD	PA	Maharashtra	C
40	Kelavli	CR	KLY	BB	Maharashtra	C
41	Kelwe Road	WR	KLV	BCT	Maharashtra	C
42	Khadavli	CR	KDV	BB	Maharashtra	C
43	Khadki	CR	KK	PA	Maharashtra	C
44	Khandeshwar	CR	KNDS	BB	Maharashtra	C
45	Khardi	CR	KE	BB	Maharashtra	C
46	Khargar	CR	KHAG	BB	Maharashtra	C
47	Khopoli	CR	KHPI	BB	Maharashtra	C
48	King'S Circle	CR	KCE	BB	Maharashtra	C
49	Kopar	CR	KOPR	BB	Maharashtra	C
50	Koparkhairane	CR	KPHN	BB	Maharashtra	C
51	Lower Parel	WR	PL	BCT	Maharashtra	C
52	Lowji	CR	LWJ	BB	Maharashtra	C
53	Mahalaksmi	WR	MX	BCT	Maharashtra	C
54	Mahim	WR	MM	BCT	Maharashtra	C
55	Malad	WR	MDD	BCT	Maharashtra	C
56	Malavali	CR	MVL	PA	Maharashtra	C
57	Mankhurd	CR	MNKD	BB	Maharashtra	C
58	Mansarovar	CR	MANR	BB	Maharashtra	C
59	Marine Lines	WR	MEL	BCT	Maharashtra	C
60	Masjid	CR	MSD	BB	Maharashtra	C
61	Matunga	CR	MTN	BB	Maharashtra	C
62	Matunga Road	WR	MRU	BCT	Maharashtra	C
63	Mira Road	WR	MIRA	BCT	Maharashtra	C
64	Mumbra	CR	MBQ	BB	Maharashtra	C
65	Nahur	CR	NHU	BB	Maharashtra	C
66	Naigaon	WR	NIG	BCT	Maharashtra	C
67	Nallasopara	WR	NSP	BCT	Maharashtra	C
68	Neral	CR	NRL	BB	Maharashtra	C
69	Nerul	CR	NEU	BB	Maharashtra	C

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70	Palasdhari	CR	PDI	BB	Maharashtra	C
71	Palghar	WR	PLG	BCT	Maharashtra	C
72	Parel	CR	PR	BB	Maharashtra	C
73	Pimpri	CR	PMP	PA	Maharashtra	C
74	Rabale	CR	RABE	BB	Maharashtra	C
75	Reay Road	CR	RRD	BB	Maharashtra	C
76	Sandhurst Road	CR	SNRD	BB	Maharashtra	C
77	Sanpada	CR	SNCR	BB	Maharashtra	C
78	Santacruz	WR	STC	BCT	Maharashtra	C
79	Saphale	WR	SAH	BCT	Maharashtra	C
80	Seawood Dharave	CR	SWDV	BB	Maharashtra	C
81	Sewri	CR	SVE	BB	Maharashtra	C
82	Shahad	CR	SHAD	BB	Maharashtra	C
83	Shelu	CR	SHLU	BB	Maharashtra	C
84	Shivajinagar	CR	SVJR	PA	Maharashtra	C
85	Sion	CR	SIN	BB	Maharashtra	C
86	Talegaon	CR	TGN	PA	Maharashtra	C
87	Thakurli	CR	THK	BB	Maharashtra	C
88	Tilaknagar	CR	TKNG	BB	Maharashtra	C
89	Titwala	CR	TLA	BB	Maharashtra	C
90	Turbhe	CR	TUH	BB	Maharashtra	C
91	Mumbai Central(Local)	WR	BCL	BCT	Maharashtra	C
92	Ulhasnagar	CR	ULNR	BB	Maharashtra	C
93	Vadgaon	CR	VDN	PA	Maharashtra	C
94	Vaitarna Road	WR	VTN	BCT	Maharashtra	C
95	Vangani	CR	VGI	BB	Maharashtra	C
96	Vangaon	WR	VGN	BCT	Maharashtra	C
97	Vasind	CR	VSD	BB	Maharashtra	C
98	Vidyavihar	CR	VVH	BB	Maharashtra	C
99	Vikhroli	CR	VK	BB	Maharashtra	C
100	Vile Parle	WR	VLP	BCT	Maharashtra	C
101	Vithalwadi	CR	VLDI	BB	Maharashtra	C

7.3 List of B category stations for Wi-Fi

S.No.	Name of Station/PoP	Railway Zone	Stn./PoP Code	Division	State	Category
1	Abohar Jn.	NR	ABS	UMB	Punjab	B
2	Adilabad	SCR	ADB	NED	Telangana	B
3	Adoni	SCR	AD	GTL	Andhra Pradesh	B
4	Adra	SER	ADRA	ADA	West Bengal	B
5	Agartala	NFR	AGTL	LMG	Tripura	B
6	Aishbagh	NER	ASH	LJN	Uttar Pradesh	B
7	Akaltara	SECR	AKT	BSP	Chhattisgarh	B
8	Pachora	CR	PC	BSL	Maharashtra	B
9	Aluabari Road	NFR	AUB	KIR	West Bengal	B
10	Ambikapur	SECR	ABKP	BSP	Chhattisgarh	B
11	Ambur	SR	AB	MAS	Tamilnadu	B
12	Amethi	NR	AME	LKO	Uttar Pradesh	B
13	Amroha	NR	AMRO	MB	Uttar Pradesh	B

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14	Dhenkanal	ECOR	DNKL	KUR	Odisha	B
15	Angul	ECOR	ANGL	KUR	Odisha	B
16	Harichandanpur	ECOR	HCNR	KUR	Odisha	B
17	Annavaram	SCR	ANV	BZA	Andhra Pradesh	B
18	Anuppur Jn.	SECR	APR	BSP	Madhya Pradesh	B
19	Araku	ECOR	ARK	WAT	Andhra Pradesh	B
20	Kendujhargarh	ECOR	KDJR	KUR	Odisha	B
21	Ariyalur	SR	ALU	TPJ	Tamilnadu	B
22	Arsikere	SWR	ASK	MYS	Karnataka	B
23	Atarra	NCR	ATE	JHS	Uttar Pradesh	B
24	Matheran\$	CR	MAE	BB	Maharashtra	B
25	Bargarh Road	ECOR	BRGA	SBP	Odisha	B
26	Babina	NCR	BAB	JHS	Uttar Pradesh	B
27	Badshahnagar	NER	BNZ	LJN	Uttar Pradesh	B
28	Bagalkot	SWR	BGK	UBL	Karnataka	B
29	Bahadurgarh	NR	BGZ	DLI	Haryana	B
30	Balangir	ECOR	BLGR	SBP	Odisha	B
31	Balotra	NWR	BLT	JU	Rajasthan	B
32	Balugaon	ECOR	BALU	KUR	Odisha	B
33	Barka Kana Jn.	ECR	BRKA	DHN	Jharkhand	B
34	Bankura	SER	BQA	ADA	West Bengal	B
35	Chandra Pura Jn.	ECR	CRP	DHN	Jharkhand	B
36	Chopan	ECR	CPU	DHN	Uttar Pradesh	B
37	Bapatla	SCR	BPP	BZA	Andhra Pradesh	B
38	Garwa Road Jn.	ECR	GHD	DHN	Jharkhand	B
39	Bareilly City	NER	BC	IZN	Uttar Pradesh	B
40	Barharwa	ER	BHW	MLDT	Jharkhand	B
41	Barsoi Jn.	NFR	BOE	KIR	Bihar	B
42	Basar	SCR	BSX	HYB	Telangana	B
43	Renukut	ECR	RNQ	DHN	Uttar Pradesh	B
44	Beawar	NWR	BER	AII	Rajasthan	B
45	Begumpet	SCR	BMT	SC	Telangana	B
46	Berhampur Court	ER	BPC	SDAH	West Bengal	B
47	Bhachau	WR	BCOB	ADI	Gujarat	B
48	Bhadrachalam Road	SCR	BDCR	SC	Telangana	B
49	Bhadravathi	SWR	BDVT	MYS	Karnataka	B
50	Biharsharif	ECR	BEHS	DNR	Bihar	B
51	Bhatapara	SECR	BYT	R	Chhattisgarh	B
52	Bhatni Jn.	NER	BTT	BSB	Uttar Pradesh	B
53	Bhawani Mandi	WCR	BWM	KOTA	Rajasthan	B
54	Bhimavaram Jn.	SCR	BVRM	BZA	Andhra Pradesh	B
55	Bhusandpur	ECOR	BSDP	KUR	Odisha	B
56	Bidar	SCR	BIDR	SC	Karnataka	B
57	Bilmora	WR	BIM	BCT	Gujarat	B
58	Barh	ECR	BARH	DNR	Bihar	B

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59	Birur	SWR	RRB	MYS	Karnataka	B
60	Bobbili	ECOR	VBL	WAT	Andhra Pradesh	B
61	Borraguhalu	ECOR	BGHU	WAT	Andhra Pradesh	B
62	Botad	WR	BTD	BVC	Gujarat	B
63	Bundi	WCR	BUDI	KOTA	Rajasthan	B
64	Rajgir	ECR	RGD	DNR	Bihar	B
65	Jhajha	ECR	JAJ	DNR	Bihar	B
66	Changanacheri	SR	CGY	TVC	Kerala	B
67	Bhabhua Road	ECR	BBU	MGS	Bihar	B
68	Chatrapur	ECOR	CAP	KUR	Odisha	B
69	Chhindwara	SECR	CWA	NGP	Madhya Pradesh	B
70	Chilka	ECOR	CLKA	KUR	Odisha	B
71	Dildarnagar Jn.	ECR	DLN	DNR	Uttar Pradesh	B
72	Begusarai	ECR	BGS	SEE	Bihar	B
73	Chittaranjan	ER	CRJ	ASN	Jharkhand	B
74	Chittoor	SCR	CTO	GTL	Andhra Pradesh	B
75	Dabra	NCR	DBA	JHS	Madhya Pradesh	B
76	Dumraon	ECR	DURE	DNR	Bihar	B
77	Mansi Jn.	ECR	MNE	SEE	Bihar	B
78	Dalsinghsarai	ECR	DSS	SEE	Bihar	B
79	Damajodi	ECOR	DMNJ	WAT	Odisha	B
80	Sonepur	ECR	SEE	SEE	Bihar	B
81	Datia	NCR	DAA	JHS	Madhya Pradesh	B
82	Dausa	NWR	DO	JP	Rajasthan	B
83	Bagaha	ECR	BUG	SPJ	Bihar	B
84	Hathidah	ECR	HTZ	DNR	Bihar	B
85	Deoband	NR	DBD	DLI	Uttar Pradesh	B
86	Devlali	CR	DVL	BSL	Maharashtra	B
87	Dewas	WR	DWX	RTM	Madhya Pradesh	B
88	Chakia	ECR	CAA	SPJ	Bihar	B
89	Dhamangaon	CR	DMN	NGP	Maharashtra	B
90	Dhanmandal	ECOR	DNM	KUR	Odisha	B
91	Dharmavaram	SCR	DMM	GTL	Andhra Pradesh	B
92	Dholpur	NCR	DHO	JHS	Rajasthan	B
93	Dhone	SCR	DHNE	GTL	Andhra Pradesh	B
94	Dinhata	NFR	DHH	APDJ	West Bengal	B
95	Duvvada	ECOR	DVD	WAT	Andhra Pradesh	B
96	Dwarka	WR	DWK	RJT	Gujarat	B
97	Faridabad Town	NR	FDN	DLI	Haryana	B
98	Faridkot	NR	FDK	FZR	Punjab	B
99	Fatehgarh	NER	FGR	IZN	Uttar Pradesh	B
100	Firozabad	NCR	FZD	ALD	Uttar Pradesh	B
101	Gadag	SWR	GDG	UBL	Karnataka	B
102	Gadarwara	WCR	GAR	JBP	Madhya Pradesh	B
103	Gangapur City	WCR	GGC	KOTA	Rajasthan	B

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104	Ganjbasoda	WCR	BAQ	BPL	Madhya Pradesh	B
105	Ghazipur City	NER	GCT	BSB	Uttar Pradesh	B
106	Sitamarhi	ECR	SMI	SPJ	Bihar	B
107	Gondal	WR	GDL	BVC	Gujarat	B
108	Gooty Jn.	SCR	GY	GTL	Andhra Pradesh	B
109	Gorakhnath	ECOR	GRKN	KUR	Odisha	B
110	Gudivada Jn.	SCR	GDV	BZA	Andhra Pradesh	B
111	Guna	WCR	GUNA	BPL	Madhya Pradesh	B
112	Bolpur	ER	BHP	HWH	West Bengal	B
113	Haiborgaon	NFR	HBN	LMG	Assam	B
114	Haldwani	NER	HDW	IZN	Uttarakhand	B
115	Harda	WCR	HD	BPL	Madhya Pradesh	B
116	Harihar	SWR	HRR	MYS	Karnataka	B
117	Harisankar Road	ECOR	HSK	SBP	Odisha	B
118	Hassan **	SWR	HAS	MYS	Karnataka	B
119	Haveri	SWR	HVR	MYS	Karnataka	B
120	Hindaun City	WCR	HAN	KOTA	Rajasthan	B
121	Hindupur	SWR	HUP	SBC	Andhra Pradesh	B
122	Hojai	NFR	HJI	LMG	Assam	B
123	Hosur	SWR	HSRA	SBC	Tamilnadu	B
124	Hotgi	CR	HG	SUR	Maharashtra	B
125	Ichchhapuram	ECOR	IPM	KUR	Andhra Pradesh	B
126	Igatpuri	CR	IGP	BB	Maharashtra	B
127	Jagdarpur	ECOR	JDB	WAT	Chhattisgarh	B
128	Jalpaiguri	NFR	JPG	KIR	West Bengal	B
129	Jaunpur City	NR	JOP	LKO	Uttar Pradesh	B
130	Jawaibandh	NWR	JWB	AII	Rajasthan	B
131	Jeypore	ECOR	JYP	WAT	Odisha	B
132	Jind	NR	JHI	DLI	Haryana	B
133	Junagarh	WR	JND	BVC	Gujarat	B
134	Kahal Gaon	ER	CLG	MLDT	Bihar	B
135	Kakinada Port	SCR	COA	BZA	Andhra Pradesh	B
136	Kaluparghat	ECOR	KAPG	KUR	Odisha	B
137	Kamareddi	SCR	KMC	HYB	Telangana	B
138	Kannauj	NER	KJN	IZN	Uttar Pradesh	B
139	Kantabanji	ECOR	KBJ	SBP	Odisha	B
140	Karad	CR	KRD	PA	Maharashtra	B
141	Kasganj Jn.	NER	KSJ	IZN	Uttar Pradesh	B
142	Kashipur Jn.	NER	KPV	IZN	Uttarakhand	B
143	Kathua	NR	KTHU	FZR	Jammu & Kashmir	B
144	Katni Murwara	WCR	KMZ	JBP	Madhya Pradesh	B
145	Kavali	SCR	KVZ	BZA	Andhra Pradesh	B
146	Khajuraho	NCR	KURJ	JHS	Madhya Pradesh	B
147	Kesinga	ECOR	KSNG	SBP	Odisha	B

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148	Khallikota	ECOR	KIT	KUR	Odisha	B
149	Khorasan Road	NER	KRND	BSB	Uttar Pradesh	B
150	Farrukhabad Jn.	NER	FBD	IZN	Uttar Pradesh	B
151	Kishangarh	NWR	KSG	JP	Rajasthan	B
152	Kochuveli	SR	KCVL	TVC	Kerala	B
153	Kokrajhar	NFR	KOJ	APDJ	Assam	B
154	Koppal	SWR	KBL	UBL	Karnataka	B
155	Koraput	ECOR	KRPU	WAT	Odisha	B
156	Kanpur (Anwarganj)	NCR	CPA	ALD	Uttar Pradesh	B
157	Sitapur	NER	STP	LJN	Uttar Pradesh	B
158	Kulitturai	SR	KZT	TVC	Tamilnadu	B
159	Dhupguri	NFR	DQG	APDJ	West Bengal	B
160	Kurukshetra	NR	KKDE	DLI	Haryana	B
161	Hasimara	NFR	HSA	APDJ	West Bengal	B
162	Kuttipuram	SR	KTU	PGT	Kerala	B
163	Lakhimpur	NER	LMP	LJN	Uttar Pradesh	B
164	Laksar	NR	LRJ	MB	Uttar Pradesh	B
165	Araria Court	NFR	ARQ	KIR	Bihar	B
166	Lalkuan	NER	LKU	IZN	Uttarakhand	B
167	Dalkhola	NFR	DLK	KIR	West Bengal	B
168	Forbesganj	NFR	FBG	KIR	Bihar	B
169	Lingampalli	SCR	LPI	SC	Telangana	B
170	Londa **	SWR	LD	UBL	Karnataka	B
171	Luckee Sarai	ECR	LKR	DNR	Bihar	B
172	Machilipatnam	SCR	MTM	BZA	Andhra Pradesh	B
173	Madanmahal	WCR	MML	JBP	Madhya Pradesh	B
174	Mahaboobnagar	SCR	MBNR	HYB	Telangana	B
175	Mahbubabad	SCR	MABD	SC	Telangana	B
176	Mairwa	NER	MW	BSB	Bihar	B
177	Makrana	NWR	MKN	JU	Rajasthan	B
178	Malkapur	CR	MKU	BSL	Maharashtra	B
179	Diphu	NFR	DPU	LMG	Assam	B
180	Mambalam	SR	MBM	MAS	Tamilnadu	B
181	Mandsaur	WR	MDS	RTM	Madhya Pradesh	B
182	Manduadih	NER	MUV	BSB	Uttar Pradesh	B
183	Mandya	SWR	MYA	SBC	Karnataka	B
184	Manikpur	NCR	MKP	JHS	Uttar Pradesh	B
185	Mankapur Jn.	NER	MUR	LJN	Uttar Pradesh	B
186	Mantralayam Road	SCR	MALM	GTL	Andhra Pradesh	B
187	Mariani	NFR	MXN	TSK	Assam	B
188	New Bongaigaon	NFR	NBQ	RNY	Assam	B
189	Mavli Jn.	NWR	MVJ	AII	Rajasthan	B
190	Melmaruvathur	SR	MLMR	MAS	Tamilnadu	B
191	Tezpur	NFR	TZTB	RNY	Assam	B
192	Merta Road	NWR	MTD	JU	Rajasthan	B

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193	Dibrugarh	NFR	DBRG	TSK	Assam	B
194	Sahibabad	NR	SBB	DLI	Uttar Pradesh	B
195	Mudkhed Jn.	SCR	MUE	NED	Maharashtra	B
196	Murtizapur	CR	MZR	BSL	Maharashtra	B
197	Nagappattinam	SR	NGT	TPJ	Tamilnadu	B
198	Nandurbar	WR	NDB	BCT	Maharashtra	B
199	Nandyal	SCR	NDL	GNT	Andhra Pradesh	B
200	Nangloi	NR	NNO	DLI	Delhi	B
201	Narasapur	SCR	NS	BZA	Andhra Pradesh	B
202	Sirsa	NWR	SSA	BKN	Haryana	B
203	Naugachia	ECR	NNA	SEE	Bihar	B
204	Nawapara Road	ECOR	NPD	SBP	Odisha	B
205	Nazibabad	NR	NBD	MB	Uttar Pradesh	B
206	Sikar	NWR	SIKR	JP	Rajasthan	B
207	Nalgonda	SCR	NLDA	GNT	Telangana	B
208	New Mal Jn.	NFR	NMZ	APDJ	West Bengal	B
209	New Tinsukia	NFR	NTSK	TSK	Assam	B
210	Nidadavolu Jn.	SCR	NDD	BZA	Andhra Pradesh	B
211	Nihal Garh	NR	NHH	LKO	Uttar Pradesh	B
212	Nimach	WR	NMH	RTM	Madhya Pradesh	B
213	Nirakarpur	ECOR	NKP	KUR	Odisha	B
214	Nursinghpur	WCR	NU	JBP	Madhya Pradesh	B
215	Okha	WR	OKHA	RJT	Gujarat	B
216	Ottappalam	SR	OTP	PGT	Kerala	B
217	Korba	SECR	KRBA	BSP	Chhattisgarh	B
218	Pendra Road *	SECR	PND	BSP	Chhattisgarh	B
219	Pakur	ER	PKR	HWH	Jharkhand	B
220	Palakollu	SCR	PKO	BZA	Andhra Pradesh	B
221	Shahdol	SECR	SDL	BSP	Madhya Pradesh	B
222	Umaria *	SECR	UMR	BSP	Madhya Pradesh	B
223	Palwal	NR	PWL	DLI	Haryana	B
224	Panagarh	ER	PAN	ASN	West Bengal	B
225	Pandharpur	CR	PVR	SUR	Maharashtra	B
226	Paradeep	ECOR	PRDP	KUR	Odisha	B
227	Paramakkudi	SR	PMK	MDU	Tamilnadu	B
228	Parli Vaijnath	SCR	PRLI	SC	Maharashtra	B
229	Nokha	NWR	NOK	JU	Rajasthan	B
230	Dongargarh	SECR	DGG	NGP	Chhattisgarh	B
231	Perambur	SR	PER	MAS	Tamilnadu	B
232	Phillaur	NR	PHR	FZR	Punjab	B
233	Phul Pur	NR	PLP	LKO	Uttar Pradesh	B
234	Pilibhit Jn.	NER	PBE	IZN	Uttar Pradesh	B
235	Porbandar	WR	PBR	BVC	Gujarat	B
236	Pryag	NR	PRG	LKO	Uttar Pradesh	B
237	Puducherry	SR	PDY	TPJ	UT Puducherry	B

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238	Chandafort *	SECR	CAF	NGP	Maharashtra	B
239	Purna	SCR	PAU	NED	Maharashtra	B
240	Purulia	SER	PRR	ADA	West Bengal	B
241	Quilandi	SR	QLD	PGT	Kerala	B
242	Rai Ka Bagh Palace Jn	NWR	RKB	JU	Rajasthan	B
243	Raiwala	NR	RWL	MB	Uttarakhand	B
244	Rajapalaiyam	SR	RJPM	MDU	Tamilnadu	B
245	Ramagundam	SCR	RDM	SC	Telangana	B
246	Ramanathapuram	SR	RMD	MDU	Tamilnadu	B
247	Ramganj Mandi	WCR	RMA	KOTA	Rajasthan	B
248	Ramtek *	SECR	RTK	NGP	Maharashtra	B
249	Raniganj	ER	RNG	ASN	West Bengal	B
250	Itwari	SECR	ITR	NGP	Maharashtra	B
251	Rishikesh	NR	RKSH	MB	Uttarakhand	B
252	Sahibganj	ER	SBG	MLDT	Jharkhand	B
253	Sakari Jn.	ECR	SKI	SPJ	Bihar	B
254	Sakhigopal	ECOR	SIL	KUR	Odisha	B
255	Salempur Jn.	NER	SRU	BSB	Uttar Pradesh	B
256	Samsi	NFR	SM	KIR	West Bengal	B
257	Sanchi	WCR	SCI	BPL	Madhya Pradesh	B
258	Sangli	CR	SLI	PA	Maharashtra	B
259	Chakradharpur	SER	CKP	CKP	Jharkhand	B
260	Satara	CR	STR	PA	Maharashtra	B
261	Sattur	SR	SRT	MDU	Tamilnadu	B
262	Sengottai	SR	SCT	MDU	Tamilnadu	B
263	Sewagram	CR	SEGM	NGP	Maharashtra	B
264	Shakurbasti	NR	SSB	DLI	Delhi	B
265	Midnapur	SER	MDN	KGP	West Bengal	B
266	Shikohabad	NCR	SKB	ALD	Uttar Pradesh	B
267	Shivpuri	WCR	SVPI	BPL	Madhya Pradesh	B
268	Simhachalam	ECOR	SCM	WAT	Andhra Pradesh	B
269	Singarayakonda	SCR	SKM	BZA	Andhra Pradesh	B
270	Karaikkudi Jn	SR	KKDI	MDU	Tamilnadu	B
271	Sirpur Kaghaznagar	SCR	SKZR	SC	Telangana	B
272	Sompeta	ECOR	SPT	KUR	Andhra Pradesh	B
273	Guruvayur	SR	GUV	TVC	Kerala	B
274	Sri Khalasthi	SCR	KHT	GTL	Andhra Pradesh	B
275	Banaswadi	SWR	BAND	SBC	Karnataka	B
276	Subzi Mandi	NR	SZM	DLI	Delhi	B
277	Sultanganj	ER	SGG	MLDT	Bihar	B
278	Suraimanpur	NER	SIP	BSB	Uttar Pradesh	B
279	Talcher	ECOR	TLHR	KUR	Odisha	B
280	Tandur	SCR	TDU	SC	Telangana	B
281	Tanuku	SCR	TNKH	BZA	Andhra Pradesh	B
282	Tenkasi Jn	SR	TSI	MDU	Tamilnadu	B

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283	Tilda	SECR	TLD	R	Chhattisgarh	B
284	Tiruttani	SR	TRT	MAS	Tamilnadu	B
285	Tiruvallur	SR	TRL	MAS	Tamilnadu	B
286	Titlagarh Jn.	ECOR	TIG	SBP	Odisha	B
287	Tornagallu	SWR	TNGL	UBL	Karnataka	B
288	Tumkur	SWR	TK	SBC	Karnataka	B
289	Udvada	WR	UVD	BCT	Gujarat	B
290	Godhara	WR	GDA	BRC	Gujarat	B
291	Una Himachal	NR	UHL	UMB	Himachal Pradesh	B
292	Varkalashivagiri	SR	VAK	TVC	Kerala	B
293	Vikarabad Jn.	SCR	VKB	SC	Telangana	B
294	Vindhyachal	NCR	BDL	ALD	Uttar Pradesh	B
295	Vriddhachalam Jn.	SR	VRI	TPJ	Tamilnadu	B
296	Wadi	CR	WADI	SUR	Karnataka	B
297	Hapa	WR	HAPA	RJT	Gujarat	B
298	Wankaner	WR	WKR	RJT	Gujarat	B
299	Dahod	WR	DHD	RTM	Gujarat	B
300	Mhow	WR	MHW	RTM	Madhya Pradesh	B
301	Yelahanka	SWR	YNK	SBC	Karnataka	B
302	Yerraguntla	SCR	YA	GTL	Andhra Pradesh	B

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