

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

1-10-39 to 44, 6A, 6th Floor, Begumpet Airport Road, Opp. Shoppers Stop, BEGUMPET, HYDERABAD- 500 016, Telangana

TENDER DOCUMENT

Limited Tender No: RCIL/ETender/22-23/SR/SC/LT/105 dated 22-10-2022

NAME OF THE STORES

Supply, Installation, Commissioning of web Application Defense Infrastructure - Wireless Application Firewall, DDoS prevention.

INDEX SHEET

Chapter	Subject	
	Tender Notice	
I	Section Online	
	Tender Data Sheet	
п	Schedule of Requirement	
11	Instructions to Tenderers and Conditions of Tendering	
Ш	Technical Specification	
Ш	Forms i. Offer Letter ii. Statement of Deviations if any iii. Format for PBG/SD & Others iv. MAF	

RailTel Corporation of India Limited

A Government of India (Ministry of Railways) Undertaking

1-10-39 to 44, 6A, 6th Floor, Begumpet Airport Road, Opp. Shoppers Stop, BEGUMPET, HYDERABAD- 500 016, Telangana

TENDER NOTICE

Limited Tender No: RCIL/ETender/22-23/SR/SC/LT/105 dated 22-10-2022

RailTel Corporation of India Ltd., Secunderabad invites tenders on RailTel ENIVIDA portal for "Supply, Installation, Commissioning of web Application Defense Infrastructure - Wireless Application Firewall, DDoS prevention." as per schedule of requirement (SOR) and specification enclosed to the tender document.

Sl No	Description of work	Earnest Money (EMD) in Rs.
1	Supply, Installation, Commissioning of web Application Defense	7.77.130/-
	Infrastructure - Wireless Application Firewall, DDoS prevention.	1,11,130/-

a)	Start Date for downloading the Tenders निविदाओं को डाउनलोड करने की प्रारंभ दिनांक	22-10-2022
b)	Closing date for Submission of E-Bids ई-निविदाएं जमा करने की अंतिम तिथि	31-10-2022 at 15.00 hrs.
c)	Date of opening of E-Bids ई-बोलियां खुलने की तिथि	31-10-2022 at 15.30 hrs.
d)	Estimated Cost of the Work कार्य की अनुमानित लागत	Rs 3,88,56,179/-
e)	Validity of offer ऑफर की वैंधता	60 days from the date of opening of tender.
f)	Delivery Period डिलीवरी की अवधि	As per Chapter-II, Section-II, Point 7 (2).
g)	Web address for availability of Tender document निविदा दस् तावेज की उपलब् धता के लिए वेब पता	Detailed tender notice and tender document are available at website https://railtel.enivida.com .

Note:

Eligible MSEs are exempted from EMD only. No other exemption will be given. पात्र एमएसई को केवल ईएमडी से छूट दी गई हैं। \sim अलावा कोई और छूट नहीं दी जाएगी।

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

निविदा सूचना और निविदा दस्तावेज रेलटेल की वेबसावट पर उपलब्ध हैं और वन्हें www.railtelindia.com या ई-निविदा पोर्टल से डाउनलोड किया जा सकता है <u>https://railtel.eNivida.com</u> । ऑनलावन बोली जमा करने के लिए निविदाकर्ता को पोर्टल <u>https://railtel.eNivida.com</u> से निविदा

दस्तावेज की एक आधिकारिक ऑनलान्न प्रति आवश्यक रूप से डाउनलोड करनी होगी। ास निविदा के लिए भविष्य की सभी सूचनाएं अर्थात
शुद्धिपत्र/परिशिष्ट/संशोधन □त्यादि केवल ई-निविदा पोर्टल पर पोस्ट की जाएंगी। निविदा दस्तावेज की मुद्रित प्रति रेलटेल कार्यालय से नहीं बेची जाएंगी।
The bidder shall bear all costs associated with the preparation, submission/participation in the bid. RailTel in no way will be responsible or liable for these costs regardless of the conduct or outcome.
बोलीदाता बोली तैयार करने, प्रस्तुत करने/बोली में भागीदारी से जुड़ी सभी लागतों को वहन करेगा। रेलटेल किसी भी तरह से आचरण या परिणाम की परवाह किए बिना वन लागतों के लिए जिम्मेदार या उत्तरदायी नहीं होगा
0.17
Sd/- Shri P.Vikrant Kumar)
Jt.GM/Marketing for RailTel Corporation of
India Limited

<u>Chapter-I</u> Section Online

These Special Instructions (for e-Tendering) supplement 'Instruction to Bidders', as enclosed in Chapter- 2, Section-II of the Tender Document.

E - Procurement is the complete process of e-Tendering from publishing of tenders online, inviting online bids, evaluation and award of contract using the system. You may keep a watch of the tenders floated under https://railtel.eNivida.com. The link of e-procurement portal is also given on our official RailTel portal i.e., www.railtelindia.com under TENDER TAB.

These will invite for online Bids. Bidder Enrolment can be done using "Online Bidder Enrolment".

The instructions given below are meant to assist the bidders in registering on the e-tender Portal and submitting their bid online on the e-tendering portal as per uploaded bid.

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

GUIDELINES FOR REGISTRATION

Bidders are required to enroll on the e-Procurement Portal (https://railtel.enivida.com/bidderRegistration/newRegistration) or click on the link "Bidder Enrolment" available on the home page of e-tender Portal by paying the Registration fee of Rs.2000/-+Applicable GST.

As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.

Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication with the bidders.

Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Only Class III Certificates with signing + encryption key usage) issued by any Certifying Authority recognized by CCA India (e.g., Sify / TCS / nCode / eMudhra etc.), with their profile.

Only valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse.

Bidder then logs in to the site through the secured log-in by entering their user ID /password and the password of the DSC /e-Token.

The scanned copies of all original documents should be uploaded in pdf format on e-tender portal.

After completion of registration payment, bidders need to send their acknowledgement copy on our help desk mail id eprocurement@railtelindia.com for activation of account.

SEARCHING FOR TENDER DOCUMENTS

There are various search options built in the e-tender Portal, to facilitate bidders to search active tenders by several parameters.

Once the bidders have selected the tenders they are interested in, you can pay the Tender fee and processing fee (NOT REFUNDABLE) by net-banking / Debit / Credit card then you may download the required documents / tender schedules, Bid documents etc. Once you pay both fee tenders will be moved to the respective 'requested' Tab. This would enable the e- tender Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.

PREPARATION OF BIDS

Bidder should consider any corrigendum published on the tender document before submitting their bids.

Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid.

Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF formats. Bid Original documents may be scanned with 100 dpi with Color option which helps in reducing size of the scanned document.

To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g., PAN card copy, GST, Annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Documents" available to them to upload such documents.

These documents may be directly submitted from the "My Documents" area while submitting a bid and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process. Already uploaded documents in this section will be displayed. Click "New" to upload new documents.

SUBMISSION OF BIDS

Bidder should log into the website well in advance for the submission of the bid so that it gets uploaded well in time i.e., on or before the bid submission time. Bidder will be responsible for any delay due to other issues.

The bidder must digitally sign and upload the required bid documents one by one as indicated in the tender document as a token of acceptance of the terms and conditions laid down by RailTel.

Bidder must select the payment option as "e-payment" to pay the tender fee / EMD as applicable and enter details of the instrument.

In case of BG bidder should prepare the BG as per the instructions specified in the tender document. The BG in original should be posted/couriered/given in person to the concerned official before the Online Opening of Financial Bid. In case of non-receipt of BG amount in original by the said time, the uploaded bid will be rejected.

Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BOQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BOQ file, open it and complete the white Colored(unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BOQ file is found to be modified by the bidder, the bid will be rejected.

The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.

The uploaded tender documents become readable only after the tender opening by the authorized bid openers.

Upon the successful and timely submission of bid click "Complete" (i.e., after Clicking "Submit" in the portal), the portal will give a successful Tender submission acknowledgement & a bid summary will be displayed with the unique id and date & time of submission of the bid with all other relevant details.

The tender summary must be printed and kept as an acknowledgement of the submission of the tender. This acknowledgement may be used as an entry pass for any bid opening meetings.

All document needs to be submitted online only. There is no need of submission of offline document. Original copy of following document is needed to be submitted by the successful bidder before issuance of LOA.

1. Offer letter complete

- 2. Schedule of Requirements shall contain the price of each item quoted exactly according to the proforma of schedule of requirements and price breakup.
- 3. Duly stamped and signed/digitally signed copy of Tender Documents/ Addenda
- 4. Earnest Money Deposit (EMD).
- 5. Constitution of Firm and Power of Attorney
- 6. System performance Guarantee
- 7. Manufacturer Authorization Form (MAF).
- 8. Clause wise compliance to tender conditions.
- 9. Any other document asked in the tender but not listed above.
- 10. Any Other information desired to be submitted by the tenderer.

For any clarification in using ENIVIDA Portal:

Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.

Any queries relating to the process of online bid submission or queries relating to e-tender Portal in general may be directed to the Helpdesk Support.

Please feel free to contact enivida Helpdesk (as given below) for any query relate to e-tendering.

Phone No.: - 011-49606060 / 9205898228 Mail id: - eprocurement@railtelindia.com

RailTel Contact:

RailTel Contact-I (for general Information)
Shri Nirav Shashikant Vaghela : DGM/Mktg/SR

Telephone 9701611844,

E-mail ID: niravvaghela@railtelindia.com

RailTel Contact-II (for general Information)

Shri P.Vikrant, Jt.GM/Marketing

Telephone: 9003144205

E-mail ID: vikrantk@railtelindia.com

TENDERER DATA SHEET For

Supply, Installation, Commissioning of web Application Defense Infrastructure - Wireless Application Firewall, DDoS prevention. (Tender No: RCIL/ETENDER/22-23/SR/SC/LT/105 DATED 22-10-2022)

S No	clause reference	Description	Remarks (Yes/No)
1	EMD as per NIT/ Exemption certificate as per Cl. No 2.0	Whether EMD/ Exemption certificate submitted online in ENIVIDA portal?	
	Offer letter as per Form-1	Offer letter uploaded?	
3	Tender Document	Tender document digitally signed along with corrigendum if any uploaded?	
4		Whether Power of attorney in non-judicial stamp paper worth of Rs.100/-enclosed with the Tender is in proper format and notarized?	
5		Whether Power of attorney is mentioning "the position of person giving power of attorney and the position of person in the company in favor of whom the Power of Attorney is being given?"	
	cl.no.6.12 instructions to tenderers section II chapter II	Whether Partnership deed, Memorandum of Joint Venture as the case may be if applicable is enclosed for partnership firm? If not applicable, then it should be mentioned as "NOT APPLICABLE" under remarks column.	
7		In case, clause no 6.12 regarding partnership firm, is not applicable, whether relevant document regarding Proprietary firm is enclosed?	
		Whether Constitution of Firm and article of association document enclosed with Offer?	
	Clause v	wise compliance and deviation statement	

S	_		Remarks
No	clause reference	Description	(Yes/No)
8		Whether clause wise compliance to the tender condition and statement of s Form- No. 2 uploaded?	
9	Manufacture Authorization Form	Whether Manufacture Authorization Form uploaded?	

Note:

All scan copies of documents listed above shall be submitted online. As per requirement of RailTel the bidder shall produce the Original Copies.

Chapter-II Section I SCHEDULE OF REQUIREMENT (SOR)

Name of the Work/Stores: Supply, Installation, Commissioning of web Application Defense Infrastructure - Wireless Application Firewall, DDoS prevention.

Tender No: RCIL/ETENDER/22-23/SR/SC/LT/105 DATED 22-10-2022

S N	Description of Work / Item(s)	Qty	Units	Rate (All Inclusive)	Amount (All Inclusive)
1	Web Application Firewalls (WAF) as per detailed specifications in Annexure-1, configured in an Active/Active High Availability setup. The WAF cluster shall protect three web applications each with concurrent 50 users. Make: Radware; Model: Alteon 5208				
1.1	Supply	2	Nos		
1.2	Installation	2	Nos		
2	DDOS Prevention Appliance to protect the above as per detailed specifications in Annexure-1 Make: Radware; Model: Defense Pro 6-1				
2.1	Supply	1	Nos	To Be filled in E-Nivida Portal	
2.2	Installation	1	Nos		
3	Management Server for managing the above				
3.1	Supply of Software & Licenses	1	Sets		
3.2	Installation & Configuration	1	Sets		
4	On-boarding of RAILTEL CUSTOMER's static website				
4.1	Installation & Configuration	1	Sets		
5	On-boarding of Web Application-1				
5.1	Installation & Configuration	1	Sets		
6	On-boarding of Web Application-2				
6.1	Installation & Configuration	1	Sets		
	Total Amoun	t All In	clusive		

General Terms and Conditions:

- 1. All Equipment should be quoted as per technical specifications.
- **2.** Bidder shall submit the detailed BOM of the equipment's offered duly verified and certified by the respective OEM
- **3.** The BOM shall be as per tender condition and scope of work.
- **4.** The material shall be supplied with all accessories, Power cords, fitting material required to install and commissioning of equipment's.
- **5.** Any license fee required to be paid for hardware & software during the life cycle of the Cards/Modules shall be included in the rate quoted by the tenderer.
- **6.** There shall be no post contractual liability of license fee on RailTel for hardware & software supplied by tenderer.
- 7. Completion period: As per Chapter-II, Section-II, Point 7 (2).
- **8.** IT, GST as applicable to the works contracts will be deducted at source and hence the rates quoted for items shall have the provisions for the same.

Note:

- (i) If there is any discrepancy in the total amount and the Unit Rate, the value shown in the Unit Rate shall be considered final for the evaluation.
- (ii) The price is inclusive of ESI, EPF and inclusive of GST, Transportation, and Insurance.
- (iii) Evaluation of tender is based on total offered value inclusive of all taxes and duties.
- (iv) The Tenderer should enclose, Tender Specific MAF (MAF- Manufacture Authorization Form) along with the bid. Bid submitted without MAF shall not be considered.
- (v) The detailed Bill of Material with rates to be enclosed. Tenderer to give the detailed break up of common units/parts/sub-modules etc. for building up the SOR items.
- (vi) Make/Model and Data sheet of the offered product to be uploaded.

Section-II

Instructions to Tenderers & Conditions of Tendering

<u>Information and Additional Terms & Conditions to Bidder for the "Supply, Installation, Commissioning of web Application Defense Infrastructure - Wireless Application Firewall, DDoS prevention.</u>

Section A: General requirement of Work

RailTel have participated in the tender floated by RAILTEL CUSTOMER vide Tender Notice No.: RAILTEL CUSTOMER/CD/AICS/SDC/1 dated: 01/04/2022 for the work of "Supply, Installation and Commissioning of Web Application Defense Infrastructure". The work is to be executed in line with RailTel End Customer M/s RAILTEL CUSTOMER. The broad scope of work is given below:

Part A: General requirement:

1. Web Application Defense Infrastructure comprising of following shall be established at RAILTEL CUSTOMER:

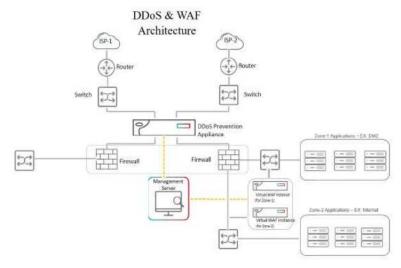
- a. Distributed Denial of Service (DDoS) prevention Appliance
- **b.** Web Application Firewall
- c. Management Server

2. The work involves:

- **a.** Supply, Installation and Commissioning as per the Bill of Material.
- **b.** Configuration of the Web Application Firewall (WAF) setup in an Active/Active High Availability setup. The WAF cluster shall protect three web applications each with concurrent 50 users.
- c. Configuration of DDoS prevention appliance with two incoming ISP.
- **d.** Integration with Blu sapphire based Cyber Security Operations Center.
- **e.** Support of the complete system
- **f.** Training on Administration of the complete system
- g. Architecture, detailed scope of work and technical specification is provided below.

3. Architecture of the proposed solution

The supplied equipment shall be configured as shown in the schematic below



4. The detailed scope of work is following:

- **a.** Configuration of Server load balancing for applications
- **b.** SSL offloading configuration for HTTPS applications
- **c.** Tunnel configuration for WAF tunnels
- d. WAF Application onboarding
- e. Auto-Policy Enabling and Attack Filters configuration
- f. Fine tuning and event refinement for application events
- g. Enable Active Blocking on WAF for traffic learnt applications
- h. Configuring VLANs, LACP, Trunk on respective Ports
- i. Configuration of VIPs and real servers for shared web servers' details
- j. Linking Security policy with respective VIPs for WAF
- k. Configuration and Security policy (WAF) for respective VIPs
- 1. Configuring High Availability and Sync on both the devices.
- **m.** Diverting the traffic on Newly configured VIP on WAF Migration
- n. Moving the traffic to the Virtual Services
- o. HA Testing and Sync Testing
- **p.** Moving the WAF into Active Mode.
- **q.** Monitoring the port traffic and statistics. WAF Passive Mode to Active Mode
- r. Learning Mode for WAF Policy configured
- s. Sharing report with RAILTEL CUSTOMER after learning period to identify false positive
- t. Refining of policy after concurrence from RAILTEL CUSTOMER on shared report
- **u.** Observation period of Logs after refinement
- v. Check for any false positive again after refinement of policy
- w. If false positive found go back to step 'm'
- **x.** If no false, Positive found reconfigure WAF policy in blocking mode for respective VIP Roll Back
- y. Option 1 Divert traffic as is, on web server before configuration of WAF/DDoS
 - Option 2 Change the mode of deployment from blocking mode to non-blocking Mode
- 5. Support (Not in the scope of present tender): Onsite support for two years by resident engineer. The support period shall start from On-boarding of the RAILTEL CUSTOMER's Static Website, and the System Maintenance & Support services will include the activities mentioned below. All support by SI/OEM has to be provided onsite. Remote access will not be allowed through any remote desktop sharing applications. Onsite Solution / System Maintenance and Support services includes:
 - Onsite resource to carry out day to day WAF operations / monitoring.
 - Onsite resource will be responsible for resolving technical issues in coordination with OEM, perform health checks, install updates and upgrades of solution.
 - Onsite resource should be able to frame WAF policies, configurations as per best practices as recommended by OEM and should fine-tune them as and when required.
 - Onsite resource should be able to perform Incidence tracking, response, and closure along with root cause analysis. (Incident Management)
 - Onsite resource should be able to do Reporting, Backup & Archival.

- Onsite resource should be able to perform Device level troubleshooting.
- Onsite resource will be responsible for Opening / Logging case with OEM, follow-up & Closure.
- Onsite resource will be responsible user level troubleshooting & ensuring SLA

 ☐ Onsite resource will be responsible for upgrade / update / patch management.
- Onsite resource will be responsible for Optimization / Performance Tuning / Configuration policy & rule optimization.
- Onsite resource should be well qualified with relevant technological certification and experience of not less than 3 years with suitable technology exposure.
- The maintenance support should be including product (major or minor) upgrades and updates. The support should be for unlimited requests. It may be provided on Email / Telephone / Onsite.
- Direct OEM Service and support should be covered under with dedicated TAM (Technical Account Manager) and onsite support, as and when required.
- The contractor will ensure that stipulated support and maintenance facilities on hardware/ software/ solution will be available for a minimum period of 5 years.
- **6. Training:** The Contractor needs to provide advanced training to a maximum of 6 officials on WAF. Details of training are as under
 - Provide training on the product architecture, functionality, and the design under the scope of this tender.
 - Provide hands-on training on all features and functionalities of WAF including operations, fine tuning, alert monitoring, policy configuration / management etc.
 - The Contractor shall train the officials for independent operation, creation of policies/rules, generation and analysis of reports, troubleshooting / familiarization of features/functionalities, policy configuration, alert monitoring.
 - Contractor shall provide comprehensive training manual, presentations, videos, lecture notes, hand-outs, and other training documentation for all trainings.

7. Terms & Condition:

1. The web applications for which the equipment is being purchased are currently under development. The equipment supplied vide this contract shall initially be configured to protect RAILTEL CUSTOMER's static website. As and when the other applications are ready, likely by mid-2023, the WAF &DDoS setup shall be reconfigured to provide protection for the same. Post the deployment of the WAF &DDoS for each web application, Documentation of the Deployment Configuration, TAC - Escalation matrix, User guide etc., shall be given to RAILTEL CUSTOMER.

2. Work Completion duration:

- Item No. 1 to 4: Six (6) months from the date of release of Work Order.
- Item No. 5 & 6: 1 year from the completion of Item No. 1 to 4.

3. Payment Terms:

- **Supply of items:** 80% of the Supply value after supplying the materials to the site & acceptance and balance 20% after successful completion of work.
- **Installation & Commissioning:** After successful completion of work.

Section-B

1.1 TENDERING INSTRUCTIONS:

The tender document duly signed and stamped/ digitally signed, complete in all respects shall be uploaded on ENIVIDA Portal. The Tenderer shall also enclose an undertaking in his offer indicating that he will accept all Terms and conditions of the tender document and have not offered any counter clauses. The bidder shall also upload the offer letter as per form -1

1.2 Tender Offer should be uploaded on ENIVIDA Portal on or before **15:00 hrs. on 31-10-2022.** The Tender will be opened on the same day at **15:30 hrs.** If it is happening to be a holiday, tender will be opened on the next working day.

2.0 EARNEST MONEY:

The tenderer shall deposit earnest money along with the tender **online** in ENIVDA Portal:

Sl No	Description of work	Earnest Money (EMD) in Rs.
1	Supply, Installation, Commissioning of web Application Defense	7,77,130/-
	Infrastructure - Wireless Application Firewall, DDoS prevention.	, ,

No bank guarantee for EMD is accepted. Earnest Money of unsuccessful Tenderers shall be returned & that of successful tenderer after supply and acceptance of the material and upon submission of valid SD/PBG. **Tenders without earnest money will be rejected.** However, Firms registered with NSIC under single point registration scheme, or any other body recognized by MSME/UDYAM are exempted from submission of EMD provided they are valid and in current. Copy of certificate to be submitted along with tender bid.

No interest is allowed on this Deposit and RailTel Corporation reserves the right to forfeit the Earnest Money Deposit in case of failure on part of the contractor to fulfill the conditions of contract.

Forfeiture of Earnest Money:

When the tenderers withdrawn or revised his offer within the validity period, RailTel has the right to forfeit the Earnest Money Deposit.

Any tender not accompanied by Earnest Money in the approved forms as mentioned in above para will be **rejected***.

2.1 Note: * Firms registered with NSIC, or any other body specified by Ministry of MSME for the tendered supply/work/service is exempted from submission of EMD. These exemptions shall be applicable provided firms are registered with NSIC/MSME/UDYAM and registration is current and valid as per extant govt rules.

3.0 Evaluation Criteria:

The Total all Inclusive Rate on FOR destination given in Schedule of Requirement, will be criteria for deciding the inter-se-position and consideration of offers against the Schedule of Requirements given in the Schedule.

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

4.0 SECURITY DEPOSIT (SD):

The security deposit amount will be equal to 5% of contract value for due fulfillment of the contract.

The amount towards SD shall be recovered from the contractor's "on account" bills as under:

- 1. The Security Deposit @ **5%** of work order value will be recovered from the Running account bills as well as final bill of the contract till full SD is covered and will be released after three months from the date of completion of warranty period i.e., **39 Month**.
- 2. No interest will be payable upon the Security Deposit

5.0 PERFORMANCE BANK GUARANTEE (PBG)

The tenderer is required to submit a Performance Bank Guarantee (PBG) within 30 days of the issue of LOA/Purchase order @ 3% of the value of the LOA/PO for the satisfactory performance of materials covered in SOR valid for a period of 12 months from the date of issue of LOA. The Performa for PBG is given in Annexure-II. If the delivery period gets extended, the PBG should also be extended appropriately.

- 5.1 The value of PBG to be submitted by the Contractor will not change for variation up to 25% (either increase or decrease). In case during execution, value of the contract increases by more than 25% of the original contract value, an additional Performance Guarantee amounting to 5% (five percent) for the excess value over the original contract value shall be deposited by the Contractor. On the other hand, if the value of contract decreases by more than 25% of the original contract value, performance Guarantee amounting to 5% (five percent) of the decrease in the contract value shall be returned to the Contractor. The PBG amount in excess of required PBG for decreased contract value, available with RailTel, shall be returned to Contractor as per his request duly safeguarding the interest of railways.
 - **5.2** The procedure for obtaining Performance Guarantee is outlined below: -

Extension of time for submission of PBG beyond 31 days and up to 60 days from the date of issue of LOA may be granted subject to the conditions that a penal interest of 15% per annum of the amount of BG shall be charged for the period of delay beyond 21 days i.e., 31st day after date of issue of LOA. In case the successful bidder is not able to submit PBG, the successful bidder will have options to submit this amount in the form of Demand Draft. In case the successful bidder fails to submit the requisite PBG even after 60 days from the date of issue of LOA, the contract shall be terminated duly en-cashing PBG submitted for empanelment and other dues, if any payable against that contract and further action shall be taken as per conditions of empanelment with RailTel.

Whenever the contract is rescinded, the Performance Bank Guarantee shall be en-cashed the balance work shall be got done independently without risk and cost of the failed contractor. The failed contractor shall be debarred from participating in the tender for executing the balance work. If the failed contractor is a JV or partnership firm, then every member or partner of such a firm shall be debarred from participating in the tender for the balance work either in his/her individual capacity or as a partner of any other JV/Partnership firm.

Note: if BG submitted, a separate advice of the BG will invariably be sent by the BG issuing bank to the RailTel's bank through SFMS and only after this the BG will become acceptable to RailTel. It is therefore in own interest of bidder to obtain RailTel's bank IFSC code, its branch and address and advise these particulars to the BG issuing bank and request them to send advice of BG through SFMS to the RailTel's Bank. The bank details of RailTel, Secunderabad is enclosed at Chapter IV Forms.

The Performance Bank Guarantee will bear no interest.

6.0 GENERAL

- **6.1** All corrections and over-writing must be attested.
- **6.2** The Tenderer should read the conditions carefully and see the schedule of requirement and technical specifications before submitting the offer.
 - No counter conditions for the clauses laid down will be permitted. Such offers are liable for rejections without intimation. In all matters of dispute, the decision of the Executive Director, Southern Region, Secunderabad shall be final and binding.
- **6.3** Tenderer while quoting may specifically note the following: -

- a) Price breakup has to be given as per SOR.
- b) During the course of Supply, any statutory variation in taxes / duties shall be to RailTel account and shall be admissible on production of valid documentary evidence. Tenderer may submit the taxes / duties' structure considered by him while quoting the rates.
- **6.4** Firm representative may visit the site and may acquaint themselves with the site conditions before quoting.
- Services like water and power supply, being required minimal, will be provided free of cost. You have to make your own arrangements, without claiming any extra cost to department, to draw the water and power supply from the scheduled available point near work site at RAILTEL CUSTOMER Hyderabad.
- Pre-award discussions will be held with the lowest bidder for finalizing other terms and conditions of the contract.
- The quoted value shall be inclusive of onsite warranty support, ESI, EPF, GST and any other mandatory duties and levies of the Government. Documentary evidence for this shall be provided along with the bills. No advance money will be given.
 - a. Firm shall provide the compliance statement for each item specification indicating adherence to it. Firm shall indicate Make/Model offered and provide technical information and datasheet/brochure and/or any documentary proof for this.
 - b. The firm shall also produce a letter from OEMs (Switching OEMs) on their letter head that they will be responsible for proper installation and satisfactory support during warranty period in case order is placed on the firm
- **Safety Requirement of Contract:** Bidder shall agree to do works as per guidance of Safety Engineer Department of RAILTEL CUSTOMER. Tentative Guidelines are given below for reference
 - a. Submission of Lab Reports & Medical Fitness Certificate from at least MBBS Doctor for each Onsite Staff before providing access to premises.
 - b. Submit all tools, ladders, and accessories for inspection by safety Engineer, RAILTEL CUSTOMER immediately after bringing at site.
 - c. Safety compliance:
 - All contract workers should always wear PPE's suitable for the hazard.
 - Attend Safety Training Provided by RAILTEL CUSTOMER.
 - Should restrict themselves to concerned area only.
 - Follow work specific do's and don'ts given by EIC.
- Addenda / Corrigenda to the tender documents may be issued by RailTel prior to the date of opening of the tenders, to clarify or reflect modifications in the contract terms and conditions or in the design. Such addendum/corrigendum shall be available on RailTel web site www.railtelindia.com and ENIVIDA Portal only. Tenderers who are unable or unwilling to bring their tenders to conform to the requirements of the RailTel are liable to be rejected.
- **6.10 Ambiguity**: If there is any ambiguity or doubt as to the meaning of any of the tender clauses/conditions or if any additional information required, the matter should immediately be referred to the RailTel in writing.
- 6.11 The contractor shall furnish Indemnity Bond for a sum equal to the cost of materials proposed to be taken by him. The quantity of materials that shall be given by the RailTel at any time shall not exceed the value of Indemnity Bond that is furnished by the Contractor.
- 6.12 CONSTITUTION OF FIRM AND POWER OF ATTORNEY

Any individual(s) signing the tender or other documents connected there with should specify whether he is signing: -

- **1.** As sole proprietor of the concern or as attorney of the sole proprietor;
- **2.** As a partner or partners of the firm;
- **3.** As a Director, Manager or Secretary in the case of Limited Company duly authorized by a resolution passed by the Board of Directors or in pursuance of the authority conferred by Memorandum of Association. In the case of a firm not registered under the Indian Partnership Act, all the partners or the attorney duly authorized by all of them should sign the tender and all other connected documents. The original Power of Attorney or other documents empowering the individual or individuals to sign should be furnished to the Purchaser for verification, if required.

Signature of Tenderer with seal

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

In case where the Power of Attorney partnership deed has not been executed in English, the true and authenticated copies of the translation of the same by Advocate, authorized translators of Courts and Licensed Petition Writers should be supplied by the Contractor(s) while tendering for the work. Power of Attorney, Partnership Deed, Memorandum of Joint Venture as the case may be in original or duly signed.

7.0 Clause Wise Compliance:

Clause wise compliance statement of the technical specifications and commercial terms & conditions shall be enclosed with the offer along with technical literature of the material and other documents in support of relevant clauses. The tender document issued by RailTel should be signed on each page along with stamp of the company/firm and should be submitted along with bid.

8.0 Delivery Period: As per Chapter-II, Section-II, Point 7 (2).

9.0 Provenness of the material / equipment supplied:

In order to enable the Purchase to assess the Provenness of the materials offered, the bidder shall provide documentary evidence regarding the materials being offered by him.

10.0 WARRANTY PERIOD:

The materials should be warranted for 3 years on all electronic hardware and software component.

The bidder shall warrant that stores to be supplied shall be new and free from all defects and faults in material, workmanship and manufacture and shall be of the highest grade and consistent with the established and generally accepted standards of material of the type ordered and shall perform in full conformity with the specifications and drawings. The contractor shall be responsible for any defects that may develop under the conditions provided in tender and under proper use, arising from faulty materials design or workmanship such as corrosion, inadequate quantity of material to meet requirements, inadequate protection, deficiencies in circuit design and / or otherwise and shall remedy such defects at his own cost when called upon to do so by the Purchaser who shall state in writing in what respect the stores are faulty.

If it becomes necessary for the contractor to replace or renew any defective portion/portions of the material under this clause, the provisions of the clause shall apply to the portion/portions of the material so replaced or renewed or until the end of the above mentioned period of twenty four months, whichever may be later, if any defect is not remedied within a reasonable time, the Purchaser may proceed accordingly at the contractor's risk and expenses, but without prejudice to any other rights which the Purchaser may have against the contractor in respect of such defects. Replacement under warranty clause shall be made by the contractor free of all charges at site including freight, insurance, and other incidental charges.

11.0 TERMS OF PAYMENT

RailTel shall issue ERP Purchase Order as per Consignee of the Material.

The Payment Terms shall be back-to-back with RailTel customer. However, the payment shall be made to the bidder within 7 days after receipt of the payment from M/s RAILTEL CUSTOMER. The payment clause of the RAILTEL CUSTOMER is given below.

- Supply of items: 80% of the Supply value after supplying the materials to the site
 & acceptance. Balance 20% after successful completion of work.
- ii) **Installation & Commissioning:** After successful completion of work.
- a) Invoice in original

- b) Delivery Challan
- c) Consignee Inspection Certificate.
- d) Warranty Certificate of OEM
- e) Copy of PBG
- f) Insurance Certificate
- **g)** Acceptance Certificate by RAILTEL CUSTOMER
- **12.0 Paying Authority:** Bill Passing Officer is GM/SC & paying officer are DGM/Fin/SR.
- **GST No:** GST& Pan details to be mentioned on the bill for arranging payment.
- 14.0 Taxes & Duties
- 15.0 Unit Rate, Taxes & Duties
 - i. The price quoted in the offer should be firm, fixed indicating the breakup and inclusive of all taxes & duties like import, custom, Anti-Dumping, CGST, SGST, IGST, UTGST etc. The offer should be inclusive of packing, forwarding, freight up to destination, insurance charges.
 - **ii.** Bidder shall issue a valid tax invoice to RailTel for availing proper credit of CGST, SGST, IGST, UTGST in case of award of contract. GST will not be reimbursed in the absence of valid tax invoice.
 - **iii.** For all the taxable supplies made by the vendor, the vendor shall furnish all the details of such taxable supplies in the relevant returns to be filed under GST Act.
 - **iv.** If the vendor fails to comply with any of the above, the vendor shall pay to purchaser any expense, interest, penalty as applicable under the GST Act.
 - v. In case of incorrect reporting of the supply made by the vendor in the relevant return, leading to disallowance of input credit to purchaser, the vendor shall be liable to pay applicable interest under the GST Act to the credit of purchaser. The same provisions shall be applicable in case of debit/credit notes.
 - vi. Tenderer shall quote all-inclusive rates, but there shall be break up of basic price and all type of applicable taxes such as SGST, CGST, IGST, UT GST along with respective HSN/SAC code under GST Law (including tax under reverse charges payable by the recipient)
 - **vii.** Wherever the law makes it Statutory for the purchaser to deduct any amount towards GST at sources, the same will be deducted and remitted to the concerned authority.
 - **viii.** In regard to works contract, the tenderer should have registration no for GST in respective State where work is to be executed and shall furnish GST registration certificate along with Tender.
 - The imposition of any new tax and /or increase in the aforesaid taxes, duties levies after the last stipulated date for the receipt of tender including extensions if any and the bidder thereupon necessarily and properly pays such taxes/ levies / Cess, the bidder shall be reimbursed the amount so paid, provided such payments, if any, is not, in the opinion of RailTel attributable to delay in execution of work within the control of bidder. The bidder shall, within a period of 30 days of the imposition of any such tax or levy or Cess, give a written notice thereof to RailTel that the same is given pursuant to this condition, together with all necessary information including details of input credit relating thereto. In the event of non-payment/ default in payment of any of the above taxes, RailTel reserves the right to with-hold the dues / payments of bidder and make payment to State / Central Government authorities as may be applicable. However, if the rates are reduced after the last stipulated date of tender, bidder has to pass on the benefits to RailTel.
 - **x.** In case of imported equipment: Anti-dumping duty if applicable on the equipment proposed to be supplied by OEM/Tenderer as per extant instructions of Ministry of Commerce/Finance Government of India has to be borne by the tenderer and shall be deducted from the amount payable to the bidder at the time of making payment to the firm if this duty amount is paid to Custom Authority by RailTel.
 - **xi.** Evaluation Criteria: inter se position of the offers will be determined on total unit rate on CIP destination basis which will include basic rate, custom duty GSST, SGST, IGST, GST, freight, insurance and any other charge or cost quoted by the tenderer, including GST payable.
 - On reverse charge by RailTel, wherever applicable.
 - **XII.** However, if the extension of contract period is on account of failure of contractor, no compensation shall be made towards upward revision or imposition of any new taxes.

Any benefit on account of downward revision of duty either in original contract period or during the extended contract period shall be passed on by the contractor to RailTel

Note: "In case the successful tenderer is not liable to be registered under CGST/IGST/UTGST/SGST Act, the RailTel shall deduct the applicable GST from his/their bills under reverse charge mechanism (RCM) and deposit the same to the concerned tax authority."

- **16.0 Others:** The details / proof of payment of GST on materials supplied to RailTel if paid shall be furnished along with the invoice. If not paid, a declaration may be furnished.
- **17.0 Transportation:** The rates quoted should be F.O.R. destination.
- **18.0 Statutory Deduction:** These will be made at source as per the rules prevalent in the area of work.

19.0 Liquidated Damages

The timely delivery is the essence of this project. Liquidated damages will be applicable at the rate of (0.5%) half percent per week or part thereof for undelivered portion subject to a maximum of **10% of the cost of supply**. RailTel will have the right to cancel the order, place order on alternative source at risk & cost of the supplier besides levying the LD. LD shall be imposed back-to-back as per with M/s RAILTEL CUSTOMER.

20.0 Purchaser's Right to Vary Quantities

The Purchaser reserves the right to increase or decrease by up to 25% (i.e., 75% to 125% quantity) of the quantity of goods and services specified in the Schedule of Requirements without any change in unit price of the ordered quantity or other terms and conditions during currency of the contract. 12 / 18 The prices for variation quantity above 125% of the original quantity shall be as follows: Variation of quantity from 125% to 140% will be 2% rebate on unit price and above 140% to 150% shall be with 4% rebate on unit price.

21.0 Purchaser's Right to accept any Bid and to reject any or all Bids

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

- 22.0 Annulment of Award Deleted
- 23.0 UNITPRICES: covered at para 15 above
- 24.0 Offer letter and Validity of Offer

The bidder shall complete the offer letter and the price schedule furnished in the bid documents, indicating the goods to be supplied, description of the goods, associated technical literature, quantity, and prices etc. For the items not manufactured by bidders, the authorization from original manufacturer should be enclosed.

The offer should remain valid for a period of 60 days from the date of opening.

25.0 Inspection:

Pre-shipment/pre-dispatch inspection shall be carried out at manufacturer's / supplier's site by authorized representative of RailTel's/Inspecting Authority or as decided by RailTel executive. Travelling, lodging & boarding expenses of RailTel's representative and charges for 3rd party inspection, if any, shall be borne by RailTel but necessary facilities if but necessary facilities to carry out tests/ witness inspection shall be provided by the manufacturer's / supplier's, free of cost

Along with inspection call, the manufacturers / suppliers shall submit details of test procedures, test program, test parameters together with permitted values, etc., and their Quality Assurance plan.

In case material fails during inspection, the same shall be replaced, free of cost, by manufacturer's / suppliers. In such case, total cost of re-inspection including travel, lodging & boarding of the inspecting officials shall be to manufacturer's / supplier's account.

RailTel may, if decided by competent authority, waive off the pre-dispatch inspection on submission of necessary QA documents.

Nominated RailTel Engineer will issue inspection certificate of successfully completion of the test/inspection.

26.0 Consignee Details:

Consignee: The Consignee Locations is at RAILTEL's CUSTOMER, Hyderabad.

27.0 FORCE MAJEURE CLAUSE:

If at any time during continuance of this Contract, the performance, in whole or part, by either party, of any obligation under this contract shall be prevented or delayed by reason of any war, hostility, act of the public enemy, Civil Commotion, Sabotage, Fires, Floods, Earth quakes, explosions, strikes, epidemics, quarantine, restrictions lockouts, any statute, statutory rules, regulations, order of requisitions issued by any Government Department or Competent Authority or acts of God (here-inafter referred to as event) then provided notice of the happening of any such, event is given by either party to the other within twenty one days from the date of occurrence thereof neither party shall by reason of such event be entitled to terminate this Contract nor shall either party have any claim for damage against the other in respect of such non-performance or delay in performance, and the obligations under the Contract shall be resumed as soon as practicable after such event has come to an end or ceased to exist, PROVIDED FURTHER that if the performance in whole or part of any obligation under this contract is prevented or delayed by reason of any such event beyond a period as mutually agreed to by the RailTel and the Contractor after any event or 60 days in the absence of such an agreement whichever is more, either party may, at its option, terminate the Contract provided also that if the contract is so terminated under this clause the RailTel may, at the time of such termination, take over from the Contractor at prices as provided for in the contract, all works executed or works under execution.

- **28.0 ARBITRATION:** 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 a sole arbitrator in accordance with provisions contained in Arbitration and Conciliation Act, 1996.
 - a) The sole arbitrator shall be appointed by the Managing Director of RailTel Corporation of India Limited. It is expressly understood between the parties that no objection shall be raised at any time after execution hereof to the appointment of the arbitrator by the Managing Director of RailTel Corporation of India Limited including that the person appointing the arbitrator is connected to and /or employed with the RailTel Corporation of India Limited.
 - b) The Venue of the arbitration shall be Secunderabad (India). The arbitration proceedings shall be conducted in English and cost of the arbitration shall be borne between the parties in equal proportion.
 - c) The Arbitrator shall give a reasoned award, which shall be binding on the parties.

29.0 TERMINATION OF CONTRACT:

RailTel reserves the right to interrupt and terminate the contract at any time, should in RailTel's opinion, the cessation of work become necessary, owing to paucity of funds of the Contractor, the Contractor's apparent inability to perform, non-procession of equipment and tools required for the work or defective and mal-functioning equipment, inability to provide men and material or for any other cause deemed reasonable. In such case, the value of approved materials utilized at site and of certified and accepted work done to date by the Contractor shall be paid for in full at the rates specified in the Contract subject to the clause of Liquidated damages contemplated herein. All such materials become the property of the RailTel. Notice in writing from the RailTel of such termination

and reason thereof shall be conclusive evidence of taking over of works from the contractor. The security deposit will be forfeited in such case of termination.

30.0 GOVERNING LAWS:

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

31.0 TERMINATION FOR INSOLVENCY:

The purchaser may at any time terminate the order/contract by giving written notice to the supplier, without compensation to the supplier, if the supplier becomes bankrupt or otherwise insolvent as declared by the competent court provided that such termination will not prejudice or affect to the Purchaser.

32.0 FALL BACK CLAUSE:

The order / contract, if and when placed, will be subject to following fallback clause:

- b. The price quoted by the supplier should not be higher than the maximum price, if any, for the materials and the same shall not be higher than the price usually charged by the supplier for materials of the same nature, class, or description to any other purchaser.
- c. The price charged for the materials supplied under the order/contract by the supplier shall in no event exceed the lowest price at which the supplier sells the materials of identical description to any other person during the period till performance of all supply orders placed during the currency of the contract is completed. If at any time during the period the supplier reduced the sale price of such materials or sells such materials to any other person including his dealers at a price lower than the price chargeable under the contract, he shall forthwith notify such reduction or sale to the purchase and the price payable under the contract for these materials supplied after the date of coming into forced of such reduction or sale shall stand correspondingly reduced.
- d. If it is discovered that the supplier has contravened the above conditions, then without prejudice to any other action which might be taken against him, it shall be lawful for the purchaser to terminate the order/contract and purchase the materials at the risk and cost of the supplier and in that event the provision of general conditions of tender shall, as far as possible, be applicable or recover the loss.
- e. The contractor shall furnish the following certificate to the concerned account officer along with each bill for payment of suppliers made against the order/contract.

"I/We certify that there has been no reduction in sale price of the stores of description identical to the stores supplied to the Government under the contract herein and such stores have not been offered/sold by me/us to any person/organization including the purchaser or any Department of Central Government or any Railway Office or any Railway Undertaking as the case may be up to the date of bill/the date of completion of supplies against all supply orders placed during the currency of the order/contract at a price lower than the price charged to the RailTel, Southern Region, under the contract."

33.0 GST: covered in para 13 above.

34.0 Make in India clause: Public Procurement (Preference to Make in India) is Applicable as per extant policy of GoI of India. The Bidder should attach relevant supporting document for seeking preference under MII Clause.

Chapter-III

Technical Specifications

Name of the work: Supply, Installation, Commissioning of web Application Defence Infrastructure - Wireless Application Firewall, DDoS prevention.

Detailed Technical Specification:

1. Specification of Web Application Firewall Appliance

i	Technical Specifications for Web Application Firewall
S.No	Functional Requirements (Minimum)
	Hardware
1	The proposed solution should be purpose build ASIC based hardware appliance
2	The hardware should have minimum 8 X 1G interfaces from Day 1
3	The hardware should have minimum, 2 X 10G SFP+ interfaces populated SR without the usage of breakout cable
4	The solution should have at least 32 GB of memory to ensure there is no performance degradation
5	Should support minimum 5 Gbps of throughput scalable up to 24 Gbps.
6	Should have dedicated SSL card to support Minimum 18K RSA CPS 2K Keys and minimum 10K ECC CPS.
7	Should support at least 800K Layer 7 requests per second and 600K Layer 4 connections per second.
	Architecture
8	Solution should be virtualization ready with OEM's own hypervisor with minimum 5 virtual instances from day 1 and scalable to 20 virtual instances
9	Should support Virtualization such that User can create multiple ADC instances per application / Network Segment based with complete isolation, Fault Tolerance and RBAC
10	Should support Virtualization such that User can create ADC instances to allocate throughput per instance and have separate configuration file, routing table, session table
11	Should support Virtualization such that individual virtual ADC instance can be rebooted independently without affecting another instance
12	Physical resources like memory, CPU must not be shared virtual ADC instance, resulting in predictable performance of each virtual instance
13	Should support multiple other features such as WAF and server load balancing that can be enabled by license on the same device.
14	Proposed Solution should be IPv6 ready as on day 1
15	System supports performing load balancing for Layers 4 through 7 of the Open Systems Interface (OSI) reference model with support to the IP, TCP and UDP protocols.
16	System should support server load balancing on the same hardware without any additional license.
17	System should support DNSSEC for server load balancing solution from day 1
18	System provides predefined Layer 7, application-level health checks (HTTP, HTTPS, LDAP, SMTP, and so on) and customized Layer 7 health checks for any binary and text-based protocols

System supports advanced health checks with the ability to decide on the server status based on parsing the data received by the health check System supports performing load balancing for Layers 4 through 7 based on source/destination IP System supports performing load balancing for Layers 4 through 7 based on application content System should support load balancing metric such as least connection, round robin, weighted, HASH, response time System should support user configurable stickiness timeout values System should support user configurable stickiness timeout values System should support user configurable stickiness timeout values System should support content switching functionality that is able to route requests to different server groups based on Layer 7 content System should support content switching functionality that is able to route requests to different server groups based on a user-defined group of destination server ports. System should support returning an error page in case the resources/application servers are not available. The error page and message must be customizable, including graphical objects. System should support leve System should support session persistency based on Source IP System should support session persistency based on Source IP System should support session persistency based on SSL session ID System should support persistency based on SSL session ID System should support persistency based on SSL session ID System should support header data injection/modification/deletion in HTTP/S in both request and response System should support the ability to inject the Client Source IP address into the Layer 7 header system should support bi-directional automatic URL modification in HTTP body System should support bi-directional automatic URL modification in HTTP body System should support bi-directional automatic URL modification in HTTP body System should support BTTP content modification to allow easy content management with no scripting required. System should s		RCIL/ETender/22-23/SR/SC/LT/105
System should support content switching functionality that is able to route requests to different server groups based on Layer 7 content System should support to near the street of the server groups based on Layer 7 content System should support content switching functionality that is able to route requests to different server groups based on Layer 7 content System should support content switching functionality that is able to route requests to different server groups based on Layer 7 content System should support content switching functionality that is able to route requests to different server groups based on a user-defined group of destination server ports. System should support returning an error page in case the resources/application servers are not available. The error page and message must be customizable, including graphical objects. System should support level System should support session persistency based on Layer 3 and 4 System should support session persistency based on Source IP System should support session persistency based on Sol. Capable of utilizing different methods for "cookie persistence": passive, insert, rewrite. System should support session persistency decisions based on static or dynamic cookies System should be able to make persistency decisions based on static or dynamic cookies System should support header data injection/modification/deletion in HTTP/S in both request and response System should support the ability to inject the Client Source IP address into the Layer 7 header System should support the ability to inject the Client Source IP address into the Layer 7 header System should support HTTP content modification to obscure server identity and structure with no scripting required. System should support HTTP content modification to allow easy content management with no scripting required System should support Both TTP content modification to allow easy content management with no scripting required System should support SSL offload - the ability to manage clien	19	
23 System should support load balancing metric such as least connection, round robin, weighted, HASH, response time 23 System should support user configurable stickiness timeout values 24 System should support content switching functionality that is able to route requests to different server groups based on Layer 7 content 25 System should support content switching functionality that is able to route requests to different server groups based on a user-defined group of destination server ports. 26 System should support returning an error page in case the resources/application servers are not available. The error page and message must be customizable, including graphical objects. 27 System should support session persistency based on Layer 3 and 4 28 System should support session persistency based on Source IP 30 System should support session persistency based on Cookie. Capable of utilizing different methods for "cookie persistence"; passive, insert, rewrite. 31 System should support session persistency based on SSL session ID 32 System should support session persistency based on SSL session ID 33 System should support cookie injection in relation to session persistence 34 System should support tookie injection in relation to session persistence 35 System should support the abelity to inject the Client Source IP address into the Layer 7 header 36 System should support the ability to inject the Client Source IP address into the Layer 7 header 37 System should support modification of URLs in the HTTP body valid in request and response 38 System should support HTTP content modification to obscure server identity and structure with no scripting required 49 System should support HTTP content modification to allow easy content management with no scripting required 40 System should support HTTP content changes with no scripting required 41 System should support based on the ability to manage client-side SSL traffic by terminating incoming SSL connections and sending the request to the server in clear text 42 System shou	20	
HASH, response time System should support user configurable stickiness timeout values System should support content switching functionality that is able to route requests to different server groups based on Layer 7 content System should support content switching functionality that is able to route requests to different server groups based on a user-defined group of destination server ports. System should support returning an error page in case the resources/application servers are not available. The error page and message must be customizable, including graphical objects. System should support IPv6 System should support session persistency based on Layer 3 and 4 System should support session persistency based on Source IP System should support session persistency based on Source IP System should support session persistency based on Sol. Session ID System should support session persistency based on Sol. Session ID System should be able to make persistency based on SSL session ID System should be able to make persistency decisions based on static or dynamic cookies System should support cookie injection in relation to session persistence System should support theader data injection/modification/deletion in HTTP/S in both request and response System should support the ability to inject the Client Source IP address into the Layer 7 header System should support bi-directional automatic URL modification in HTTP body System should support bi-directional automatic URL modification in HTTP body System should support HTTP content modification to obscure server identity and structure with no scripting required. System should support HTTP content modification to allow easy content management with no scripting required. System should support HTTP content changes with no scripting required System should support bi-directional persistency by significant in the PEM and PKCS#12 format System should support backend SSL encryption – terminate the SSL clients on the frontend, and open a set of SSL sessions to	21	System supports performing load balancing for Layers 4 through 7 based on application content
System should support content switching functionality that is able to route requests to different server groups based on Layer 7 content System should support content switching functionality that is able to route requests to different server groups based on a user-defined group of destination server ports. System should support returning an error page in case the resources/application servers are not available. The error page and message must be customizable, including graphical objects. System should support IPv6 System should support session persistency based on Layer 3 and 4 System should support session persistency based on Source IP System should support session persistency based on Source IP System should support session persistency based on Solt session ID System should support session persistency based on SSL session ID System should support session persistency decisions based on static or dynamic cookies System should be able to make persistency decisions based on static or dynamic cookies System should support cookie injection in relation to session persistence System should support header data injection/modification/deletion in HTTP/S in both request and response System should support the ability to inject the Client Source IP address into the Layer 7 header System should support modification of URLs in the HTTP body valid in request and response System should support HTTP content modification to obscure server identity and structure with no scripting required. System should support HTTP content modification to allow easy content management with no scripting required. System should support scripting capabilities for HTTP and non-HTTP traffic System should support SSL offload - the ability to manage client-side SSL traffic by terminating incoming SSL connections and sending the request to the server in clear text System should support backend SSL encryption – terminate the SSL clients on the frontend, and open a set of SSL sessions to the back-end System should support backend SSL	22	
server groups based on Layer 7 content System should support content switching functionality that is able to route requests to different server groups based on a user-defined group of destination server ports. System should support returning an error page in case the resources/application servers are not available. The error page and message must be customizable, including graphical objects. 27 System should support IPv6 28 System should support session persistency based on Layer 3 and 4 29 System should support session persistency based on Source IP 30 System should support session persistency based on Cookie. Capable of utilizing different methods for "cookie persistence": passive, insert, rewrite. 31 System should support session persistency based on SSL session ID 32 System should be able to make persistency decisions based on static or dynamic cookies 33 System should support header data injection/modification/deletion in HTTP/S in both request and response 34 System should support the ability to inject the Client Source IP address into the Layer 7 header 35 System should support modification of URLs in the HTTP body valid in request and response 36 System should support bi-directional automatic URL modification in HTTP body 37 System should support HTTP content modification to obscure server identity and structure with no scripting required. 38 System should support HTTP content modification to allow easy content management with no scripting required 40 System should support SSL offload - the ability to manage client-side SSL traffic by terminating incoming SSL connections and sending the request to the server in clear text 43 System should support backend SSL encryption – terminate the SSL clients on the frontend, and open a set of SSL sessions to the back-end 44 System should support passing client IP addresses through Secure Socket Layers (SSL) 45 System should support the ability to handle all SSL client authentication tasks (request or require client certificates) no	23	System should support user configurable stickiness timeout values
server groups based on a user-defined group of destination server ports. System should support returning an error page in case the resources/application servers are not available. The error page and message must be customizable, including graphical objects. System should support IPv6 System should support session persistency based on Layer 3 and 4 System should support session persistency based on Source IP System should support session persistency based on Cookie. Capable of utilizing different methods for "cookie persistence": passive, insert, rewrite. System should support session persistency based on SSL session ID System should be able to make persistency based on SSL session ID System should be able to make persistency based on SSL session ID System should support cookie injection in relation to session persistence System should support the ability to inject the Client Source IP address into the Layer 7 header System should support modification of URLs in the HTTP body valid in request and response System should support bi-directional automatic URL modification in HTTP body System should support HTTP content modification to obscure server identity and structure with no scripting required. System should support HTTP content modification to allow easy content management with no scripting required. System should support HTTP content changes with no scripting required System should support SSL offload - the ability to manage client-side SSL traffic by terminating incoming SSL connections and sending the request to the server in clear text System should support SSL offload - the ability to manage client-side SSL traffic by terminating incoming SSL connections and sending the request to the server in clear text System should support passing client IP addresses through Secure Socket Layers (SSL) System should support the ability to handle all SSL client authentication tasks (request or require client certificates) normally handled by the target server.	24	
26 available. The error page and message must be customizable, including graphical objects. 27 System should support IPv6 28 System should support session persistency based on Layer 3 and 4 29 System should support session persistency based on Source IP 30 methods for "cookie persistence": passive, insert, rewrite. 31 System should support session persistency based on SSL session ID 32 System should support session persistency based on SSL session ID 33 System should support cookie injection in relation to session persistence 34 System should support header data injection/modification/deletion in HTTP/S in both request and response 35 System should support the ability to inject the Client Source IP address into the Layer 7 header 36 System should support modification of URLs in the HTTP body valid in request and response 37 System should support bi-directional automatic URL modification in HTTP body 38 System should support HTTP content modification to obscure server identity and structure with no scripting required. 39 System should support HTTP content modification to allow easy content management with no scripting required. 40 System should support HTTP content changes with no scripting required 41 System should support SSL offload - the ability to manage client-side SSL traffic by terminating incoming SSL connections and sending the request to the server in clear text 43 System should support backend SSL encryption – terminate the SSL clients on the frontend, and open a set of SSL sessions to the back-end 44 System should support passing client IP addresses through Secure Socket Layers (SSL) 53 System should support the ability to handle all SSL client authentication tasks (request or require client certificates) normally handled by the target server.	25	
28 System should support session persistency based on Layer 3 and 4 29 System should support session persistency based on Source IP 30 System should support session persistency based on Cookie. Capable of utilizing different methods for "cookie persistence": passive, insert, rewrite. 31 System should support session persistency based on SSL session ID 32 System should be able to make persistency decisions based on static or dynamic cookies 33 System should support cookie injection in relation to session persistence 34 System should support header data injection/modification/deletion in HTTP/S in both request and response 35 System should support the ability to inject the Client Source IP address into the Layer 7 header 36 System should support modification of URLs in the HTTP body valid in request and response 37 System should support bi-directional automatic URL modification in HTTP body 38 System should support HTTP content modification to obscure server identity and structure with no scripting required. 39 System should support HTTP content modification to allow easy content management with no scripting required 40 System should support HTTP content changes with no scripting required 41 System should support BSL offload - the ability to manage client-side SSL traffic by terminating incoming SSL connections and sending the request to the server in clear text 43 System should support backend SSL encryption – terminate the SSL clients on the frontend, and open a set of SSL sessions to the back-end 44 System should support passing client IP addresses through Secure Socket Layers (SSL) 45 System should support the ability to handle all SSL client authentication tasks (request or require client certificates) normally handled by the target server.	26	
29 System should support session persistency based on Source IP 30 System should support session persistency based on Cookie. Capable of utilizing different methods for "cookie persistence": passive, insert, rewrite. 31 System should support session persistency based on SSL session ID 32 System should be able to make persistency decisions based on static or dynamic cookies 33 System should support cookie injection in relation to session persistence 34 System should support header data injection/modification/deletion in HTTP/S in both request and response 35 System should support the ability to inject the Client Source IP address into the Layer 7 header 36 System should support modification of URLs in the HTTP body valid in request and response 37 System should support HTTP content modification to obscure server identity and structure with no scripting required. 39 System should support HTTP content modification to allow easy content management with no scripting required 40 System should support HTTP content changes with no scripting required 41 System should support scripting capabilities for HTTP and non-HTTP traffic 42 System should support SSL offload - the ability to manage client-side SSL traffic by terminating incoming SSL connections and sending the request to the server in clear text 43 System should support backend SSL encryption – terminate the SSL clients on the frontend, and open a set of SSL sessions to the back-end 44 System should support passing client IP addresses through Secure Socket Layers (SSL) 45 System should support the ability to handle all SSL client authentication tasks (request or require client certificates) normally handled by the target server.	27	System should support IPv6
System should support session persistency based on Cookie. Capable of utilizing different methods for "cookie persistence": passive, insert, rewrite. System should support session persistency based on SSL session ID System should be able to make persistency decisions based on static or dynamic cookies System should support cookie injection in relation to session persistence System should support header data injection/modification/deletion in HTTP/S in both request and response System should support the ability to inject the Client Source IP address into the Layer 7 header System should support modification of URLs in the HTTP body valid in request and response System should support HTTP content modification to obscure server identity and structure with no scripting required. System should support HTTP content modification to allow easy content management with no scripting required System should support HTTP content changes with no scripting required System should support scripting capabilities for HTTP and non-HTTP traffic System should support SSL offload - the ability to manage client-side SSL traffic by terminating incoming SSL connections and sending the request to the server in clear text System should support backend SSL encryption - terminate the SSL clients on the frontend, and open a set of SSL sessions to the back-end System should support passing client IP addresses through Secure Socket Layers (SSL) System should support the ability to handled by the target server. System should support the solility to handled by the target server.	28	System should support session persistency based on Layer 3 and 4
methods for "cookie persistence": passive, insert, rewrite. System should support session persistency based on SSL session ID System should be able to make persistency decisions based on static or dynamic cookies System should support cookie injection in relation to session persistence System should support header data injection/modification/deletion in HTTP/S in both request and response System should support the ability to inject the Client Source IP address into the Layer 7 header System should support modification of URLs in the HTTP body valid in request and response System should support bi-directional automatic URL modification in HTTP body System should support HTTP content modification to obscure server identity and structure with no scripting required. System should support HTTP content modification to allow easy content management with no scripting required System should support HTTP content changes with no scripting required System should support scripting capabilities for HTTP and non-HTTP traffic System should support SSL offload - the ability to manage client-side SSL traffic by terminating incoming SSL connections and sending the request to the server in clear text System should support backend SSL encryption - terminate the SSL clients on the frontend, and open a set of SSL sessions to the back-end System should support passing client IP addresses through Secure Socket Layers (SSL) System should support the ability to handle all SSL client authentication tasks (request or require client certificates) normally handled by the target server. System should support passing the client certificate information to the destination Web server.	29	System should support session persistency based on Source IP
System should be able to make persistency decisions based on static or dynamic cookies System should support cookie injection in relation to session persistence System should support header data injection/modification/deletion in HTTP/S in both request and response System should support the ability to inject the Client Source IP address into the Layer 7 header System should support modification of URLs in the HTTP body valid in request and response System should support bi-directional automatic URL modification in HTTP body System should support HTTP content modification to obscure server identity and structure with no scripting required. System should support HTTP content modification to allow easy content management with no scripting required Systems should support HTTP content changes with no scripting required System should support scripting capabilities for HTTP and non-HTTP traffic System should support SSL offload - the ability to manage client-side SSL traffic by terminating incoming SSL connections and sending the request to the server in clear text System should support backend SSL encryption – terminate the SSL clients on the frontend, and open a set of SSL sessions to the back-end System should support passing client IP addresses through Secure Socket Layers (SSL) System should support the ability to handle all SSL client authentication tasks (request or require client certificates) normally handled by the target server.	30	
System should support cookie injection in relation to session persistence System should support header data injection/modification/deletion in HTTP/S in both request and response System should support the ability to inject the Client Source IP address into the Layer 7 header System should support modification of URLs in the HTTP body valid in request and response System should support bi-directional automatic URL modification in HTTP body System should support HTTP content modification to obscure server identity and structure with no scripting required. System should support HTTP content modification to allow easy content management with no scripting required System should support SSL offload - the ability to manage client-side SSL traffic by terminating incoming SSL connections and sending the request to the server in clear text System should support backend SSL encryption – terminate the SSL clients on the frontend, and open a set of SSL sessions to the back-end System should support passing client IP addresses through Secure Socket Layers (SSL) System should support SSL certificates import/export in the PEM and PKCS#12 format System should support handled by the target server. System should support passing the client certificate information to the destination Web server.	31	System should support session persistency based on SSL session ID
System should support header data injection/modification/deletion in HTTP/S in both request and response System should support the ability to inject the Client Source IP address into the Layer 7 header System should support modification of URLs in the HTTP body valid in request and response System should support bi-directional automatic URL modification in HTTP body System should support HTTP content modification to obscure server identity and structure with no scripting required. System should support HTTP content modification to allow easy content management with no scripting required System should support HTTP content changes with no scripting required System should support scripting capabilities for HTTP and non-HTTP traffic System should support SSL offload - the ability to manage client-side SSL traffic by terminating incoming SSL connections and sending the request to the server in clear text System should support backend SSL encryption - terminate the SSL clients on the frontend, and open a set of SSL sessions to the back-end System should support passing client IP addresses through Secure Socket Layers (SSL) System should support SSL certificates import/export in the PEM and PKCS#12 format System should support passing the client certificate information to the destination Web server.	32	System should be able to make persistency decisions based on static or dynamic cookies
34 and response 35 System should support the ability to inject the Client Source IP address into the Layer 7 header 36 System should support modification of URLs in the HTTP body valid in request and response 37 System should support bi-directional automatic URL modification in HTTP body 38 System should support HTTP content modification to obscure server identity and structure with no scripting required. 39 System should support HTTP content modification to allow easy content management with no scripting required 40 System should support HTTP content changes with no scripting required 41 System should support scripting capabilities for HTTP and non-HTTP traffic 42 System should support SSL offload - the ability to manage client-side SSL traffic by terminating incoming SSL connections and sending the request to the server in clear text 43 System should support backend SSL encryption - terminate the SSL clients on the frontend, and open a set of SSL sessions to the back-end 44 System should support passing client IP addresses through Secure Socket Layers (SSL) 45 System should support the ability to handle all SSL client authentication tasks (request or require client certificates) normally handled by the target server. System should support passing the client certificate information to the destination Web server.	33	System should support cookie injection in relation to session persistence
System should support the ability to inject the Client Source IP address into the Layer 7 header System should support modification of URLs in the HTTP body valid in request and response System should support bi-directional automatic URL modification in HTTP body System should support HTTP content modification to obscure server identity and structure with no scripting required. System should support HTTP content modification to allow easy content management with no scripting required System should support HTTP content changes with no scripting required System should support scripting capabilities for HTTP and non-HTTP traffic System should support SSL offload - the ability to manage client-side SSL traffic by terminating incoming SSL connections and sending the request to the server in clear text System should support backend SSL encryption – terminate the SSL clients on the frontend, and open a set of SSL sessions to the back-end System should support passing client IP addresses through Secure Socket Layers (SSL) System should support the ability to handle all SSL client authentication tasks (request or require client certificates) normally handled by the target server.	34	
System should support bi-directional automatic URL modification in HTTP body System should support HTTP content modification to obscure server identity and structure with no scripting required. System should support HTTP content modification to allow easy content management with no scripting required System should support HTTP content changes with no scripting required System should support scripting capabilities for HTTP and non-HTTP traffic System should support SSL offload - the ability to manage client-side SSL traffic by terminating incoming SSL connections and sending the request to the server in clear text System should support backend SSL encryption – terminate the SSL clients on the frontend, and open a set of SSL sessions to the back-end System should support passing client IP addresses through Secure Socket Layers (SSL) System should support the ability to handle all SSL client authentication tasks (request or require client certificates) normally handled by the target server.	35	-
System should support HTTP content modification to obscure server identity and structure with no scripting required. System should support HTTP content modification to allow easy content management with no scripting required Systems should support HTTP content changes with no scripting required System should support scripting capabilities for HTTP and non-HTTP traffic System should support SSL offload - the ability to manage client-side SSL traffic by terminating incoming SSL connections and sending the request to the server in clear text System should support backend SSL encryption – terminate the SSL clients on the frontend, and open a set of SSL sessions to the back-end System should support passing client IP addresses through Secure Socket Layers (SSL) System should support the ability to handle all SSL client authentication tasks (request or require client certificates) normally handled by the target server.	36	System should support modification of URLs in the HTTP body valid in request and response
39 System should support HTTP content modification to allow easy content management with no scripting required 40 Systems should support HTTP content changes with no scripting required 41 System should support scripting capabilities for HTTP and non-HTTP traffic 42 System should support SSL offload - the ability to manage client-side SSL traffic by terminating incoming SSL connections and sending the request to the server in clear text 43 System should support backend SSL encryption – terminate the SSL clients on the frontend, and open a set of SSL sessions to the back-end 44 System should support passing client IP addresses through Secure Socket Layers (SSL) 45 System should support SSL certificates import/export in the PEM and PKCS#12 format 46 System should support the ability to handle all SSL client authentication tasks (request or require client certificates) normally handled by the target server.	37	System should support bi-directional automatic URL modification in HTTP body
scripting required Systems should support HTTP content changes with no scripting required System should support scripting capabilities for HTTP and non-HTTP traffic System should support SSL offload - the ability to manage client-side SSL traffic by terminating incoming SSL connections and sending the request to the server in clear text System should support backend SSL encryption – terminate the SSL clients on the frontend, and open a set of SSL sessions to the back-end System should support passing client IP addresses through Secure Socket Layers (SSL) System should support SSL certificates import/export in the PEM and PKCS#12 format System should support the ability to handle all SSL client authentication tasks (request or require client certificates) normally handled by the target server.	38	
System should support SSL offload - the ability to manage client-side SSL traffic by terminating incoming SSL connections and sending the request to the server in clear text System should support backend SSL encryption – terminate the SSL clients on the frontend, and open a set of SSL sessions to the back-end System should support passing client IP addresses through Secure Socket Layers (SSL) System should support SSL certificates import/export in the PEM and PKCS#12 format System should support the ability to handle all SSL client authentication tasks (request or require client certificates) normally handled by the target server.	39	
System should support SSL offload - the ability to manage client-side SSL traffic by terminating incoming SSL connections and sending the request to the server in clear text System should support backend SSL encryption – terminate the SSL clients on the frontend, and open a set of SSL sessions to the back-end System should support passing client IP addresses through Secure Socket Layers (SSL) System should support SSL certificates import/export in the PEM and PKCS#12 format System should support the ability to handle all SSL client authentication tasks (request or require client certificates) normally handled by the target server.	40	Systems should support HTTP content changes with no scripting required
incoming SSL connections and sending the request to the server in clear text System should support backend SSL encryption – terminate the SSL clients on the frontend, and open a set of SSL sessions to the back-end System should support passing client IP addresses through Secure Socket Layers (SSL) System should support SSL certificates import/export in the PEM and PKCS#12 format System should support the ability to handle all SSL client authentication tasks (request or require client certificates) normally handled by the target server.	41	System should support scripting capabilities for HTTP and non-HTTP traffic
open a set of SSL sessions to the back-end System should support passing client IP addresses through Secure Socket Layers (SSL) System should support SSL certificates import/export in the PEM and PKCS#12 format System should support the ability to handle all SSL client authentication tasks (request or require client certificates) normally handled by the target server.	42	
System should support SSL certificates import/export in the PEM and PKCS#12 format System should support the ability to handle all SSL client authentication tasks (request or require client certificates) normally handled by the target server. System should support passing the client certificate information to the destination Web server.	43	1.
System should support the ability to handle all SSL client authentication tasks (request or require client certificates) normally handled by the target server. System should support passing the client certificate information to the destination Web server.	44	System should support passing client IP addresses through Secure Socket Layers (SSL)
client certificates) normally handled by the target server. System should support passing the client certificate information to the destination Web server.	45	System should support SSL certificates import/export in the PEM and PKCS#12 format
System should support passing the client certificate information to the destination Web server	46	
	47	System should support passing the client certificate information to the destination Web server

	RCIL/ETender/22-23/SR/SC/LT/105
48	System should support hardware-based SSL acceleration
49	System should support client certificate authentication along with OCSP validation
50	System will be able to define the allowed signing algorithms for OCSP responses without the need for scripting solutions
51	System should support SHA1 and SHA2 (Secured Hashing Algorithm)
52	System should support managing Server certificates at the Virtual Service level
53	System should support secure renegotiation (RFC 5746)
54	System should support Certificate Validation Policies (validation of certificate parameters values)
55	System should support TCP Multiplexing
56	System should support HTTP compression
57	Selective compression to avoid compression problems in commonly used browsers
58	System should support Web caching in compliance with RFC 2616 of HTTP 1.1 or with ability to override RFC behaviour.
59	System should support Browser Cache optimization techniques such as rewriting attributes
60	System should support TCP optimization
61	System should support HTTP 3.0 Gateway to accelerate web applications over Internet/WAN and TLS 1.2, TLS 1.3.
62	WAF should support negative (out-of-the-box) and positive (application tailored) security models and should be able to mitigate OWASP top 2021 attacks.
63	WAF must have inbuilt VA scanner to ensure application vulnerability is being covered by automatic policy configuration.
64	WAF should support dynamic source IP blocking based on the attack scores.
65	Should be able to implement geo-location policies to restrict access
66	Should protect against Sensitive Data Leakage protection using response scrub. It should have minimum features like: PHP information leakages, IIS default location, ASP / JSP source code leakages, SQL error leakages, Directory Listing, HTTP Header Leakage, Access to admin folder, Slow Loris and other low & slow availability attacks, Prevention of Error messages leakage
67	WAF should protect against the following: brute force, Cookie Poisoning, session hijacking, parameter tampering, XML injection, SQL Injection, LDAP and XPath injections, OS commanding, cross site scripting (XSS), Cross-site Request Forgery (CSRF), HTTP response splitting, header injection, path traversal, remote file inclusion, buffer overflow, null byte injection, dictionary attacks, automation and excessive data access, uploading of executable files, known web server vulnerability, Geo Location and Client Source IP address based Security Policy, ICAP integration with DLP server, Base64 Encoded attacks blocking.
68	WAF should support user tracking and authentication to provide accurate policies to prevent fraud.
69	WAF should support automatically creates the application tailored rules for the different security modules
70	WAF should provide Activity Tracking for application users.
71	WAF should support learning all web application pages for Layer 7 access control
72	WAF should support custom defined (regular expression) sensitive content for masking in response.
73	WAF should support response replacement in case of error messages in web server response
74	WAF should support Layer 7 White-listing and Blacklisting
	Signature of Tandarar with saal

	RCIL/ETender/22-23/SR/SC/LT/105
75	WAF should support Parameter signing.
76	WAF should support Parameter Encryption.
77	WAF should support hidden form fields signing and encryption.
78	Should support Device Fingerprinting with which should be IP Agnostic to protect against attacks from CDN and Proxies.
79	WAF should support cookie encryption and signing.
80	Solution should support scripting with Layer 7 configuration to support for business requirements.
81	Should support Behaviour analysis feature and able to generate real time signature on fly automatically.
82	Should support Layer 7 IP Extraction.
83	Solution should enforce API throttling.
84	Solution should ensure API schema validation.
85	Solution should protect from API based DDOS attacks and shall accept connections only from Indian IPs.
86	Solution should be support open swagger file import to protect the APIs from application layer attacks.
87	Solution should support activity tracking to detect bad bot traffic.
88	Solution should prevent from DDOS attacks from bots.
89	Solution should support the detection and prevention from 4th generation human like bots for future use.
90	Solution should support collective bot intelligence.
91	The centralized management station should manage configuration and collect real-time and historical logs from Server Load Balancing and WAF
92	Solution should support device fingerprinting to detect and protect from bad bot traffic.
	Reporting and Auditing
	Cyber Security Compliance Reports and logs – Forensic report should provide the following minimum key information
	I) Status of the Applications (Up, Down, Admin-Down, Shutdown, Warning).
	II) Top Applications by Throughput (bps)
	III) Top Applications by Request (per sec)
	IV) Application Name
	V) Protocol
	VI) Current Throughput (bps)
93	VII) Current Connections (per sec)
	VIII) Concurrent Connections
	IX) Source IP
	X) Groups (Up/Total)
	XI) Real Servers (Up/Total)
	XII) End-to-End Time
	XIII) TLS Version
	XIV) Key Exchange Algorithms
•	

XVI) Top Used Ciphers XVI) Rejected SSL Handshakes (%) XVII) SSL Connections per Second XVIII) URL & Hostname 94 Integration with RADIUS and TACACS+ 95 Quoted OEM should have India TAC for local support 96 System must have supporting tools for central monitoring 97 Management certificate must be possible to change 98 The system must have a dedicated management port for Out-of-Band management 99 The system must support configuration via standard up to date web browsers. System	
XVII) SSL Connections per Second XVIII) URL & Hostname 94 Integration with RADIUS and TACACS+ 95 Quoted OEM should have India TAC for local support 96 System must have supporting tools for central monitoring 97 Management certificate must be possible to change 98 The system must support configuration via standard up to date web browsers. System	
XVIII) URL & Hostname 94 Integration with RADIUS and TACACS+ 95 Quoted OEM should have India TAC for local support 96 System must have supporting tools for central monitoring 97 Management certificate must be possible to change 98 The system must support configuration via standard up to date web browsers. System	
94 Integration with RADIUS and TACACS+ 95 Quoted OEM should have India TAC for local support 96 System must have supporting tools for central monitoring 97 Management certificate must be possible to change 98 The system must have a dedicated management port for Out-of-Band management The system must support configuration via standard up to date web browsers. System	
95 Quoted OEM should have India TAC for local support 96 System must have supporting tools for central monitoring 97 Management certificate must be possible to change 98 The system must have a dedicated management port for Out-of-Band management The system must support configuration via standard up to date web browsers. System	
96 System must have supporting tools for central monitoring 97 Management certificate must be possible to change 98 The system must have a dedicated management port for Out-of-Band management The system must support configuration via standard up to date web browsers. System	
97 Management certificate must be possible to change 98 The system must have a dedicated management port for Out-of-Band management The system must support configuration via standard up to date web browsers. System	
98 The system must have a dedicated management port for Out-of-Band management The system must support configuration via standard up to date web browsers. System	
The system must support configuration via standard up to date web browsers. System	
The system must support configuration via standard up to date web browsers. System	
interface must be based on HTML	user
100 Role/User Based Access Control should be available	
General Terms and Conditions	
The solution should be compatible with SDN/SDDC architectures like Cisco ACI, VMV Open stack etc.	Ware NSX,
Proposed solution must be deployed in at least one State Data Center / Govt entity in years	last 3
No 3rd party Server Load Balancer solution is acceptable which can be loaded as insta device	ance on
104 OEM should be present in the market for at least 5 years	
Proposed OEM should be Make in India compliant with Local content equal or above 105	80%.
Proposed solution should be with 3 (three) year comprehensive warranty with 24x7 su OEM	pport from
107 OEM Should provide 2-day training to required team after deployment of device.	_

2. Specifications of DDoS Prevention Appliance

Technical Specifications for DDOS Appliance							
S.No	Functional Requirements (Minimum)						
	Hardware and Performance						
1	DDoS solution should be a dedicated hardware appliance and not a licensed feature on Firewall or Load Balancer Appliance or Proxy Based Architecture or a VM based solution installed on a server machine.						
2	Device should have at least 6 x 1 G interfaces & 2 x 1/10G SPF+ all independent ports. No breakout cable / connectors to be used in the interfaces.						
3	Each appliance should have at least 2 X 10G SFP+ interfaces (populated with SR interface) & 6 X 1GE interfaces during supply						
4	System should have inspection throughput of 1Gbps and scalable to 5Gbps with license upgrade						
5	Should support latency less than 60 microseconds						
6	System should have High performance ASIC-based DoS-mitigation engine that ensures that attack mitigation does not affect normal traffic processing and Maximum DDoS Flood Attack Prevention Rate up to at least 7 million PPS						

8 The device should have dual power supply. 9 System should support Multiple Segment protection Technical Requirements 10 System should support In-Line, SPAN Port, Out-of-Path deployment modes from day 1 System should support following environments: Symmetric, Asymmetric Ingress, Asymmetric Mesh 12 Solution should be transparent to control protocol like MPLS and 802.1 Q tagged VLAN environment. Also, it should be transparent to LZTP, GRE, IP in IP traffic. 13 The system should be transparent to logical link bundle' protocols like LACP 14 Solution should detect and mitigate IPv6/IPv4 Attacks 15 The DDoS detection capability of the solution must not be impacted by asymmetric traffic routing. 16 Solution should detect and Mitigate attacks from Layer 3 to Layer 7 17 Solution should support standard network MTU. 18 The system must allow protection parameters to be changed while a protection is running. Such change must not cause traffic interruption 19 System should Protect from multiple attack vectors on different layers at the same time with combination of Network, Application, and Server-side attacks 20 Solution should provide protection for volumetric/Protocol and Application layer-based DDoS attacks 21 Inspection and prevention are to be done in same hardware 22 The system must have an updated threat feed that describes new malicious traffic (botnets phishing, etc). 23 The system should be capable to mitigate and detect both inbound and outbound traffic at shall accept connections only from Indian IPs. 24 Solution should provide real time Detection and protection from unknown Network DDoS attacks. 25 System should have mitigation mechanism to protect against zero- day DoS and DDoS attacks without manual intervention. 26 System supports behavioural-based application-layer HTTP DDoS protection 27 System supports behavioural-based application-layer HTTP DDoS protection 28 System supports DNS application behavioural analysis DDoS protection 29 System must be able to detect and block SYN Flood attacks and should	7	RCIL/ETender/22-23/SR/SC/LT/1
Technical Requirements Technical Requirements 10 System should support In-Line, SPAN Port, Out-of-Path deployment modes from day 1 System should support following environments: Symmetric, Asymmetric Ingress, Asymmethesh Mesh 12 Solution should be transparent to control protocol like MPLS and 802.1 Q tagged VLAN environment. Also, it should be transparent to L2TP, GRE, IP in IP traffic. 13 The system should be transparent to 'logical link bundle' protocols like LACP 14 Solution should detect and mitigate IPv6/IPv4 Attacks 15 The DDoS detection capability of the solution must not be impacted by asymmetric traffic routing. 16 Solution should detect and Mitigate attacks from Layer 3 to Layer 7 17 Solution should support standard network MTU. 18 The system must allow protection parameters to be changed while a protection is running. Such change must not cause traffic interruption 19 System should Protect from multiple attack vectors on different layers at the same time with combination of Network, Application, and Server-side attacks 20 DDoS attacks 21 Inspection and prevention are to be done in same hardware 22 The system must have an updated threat feed that describes new malicious traffic (botnets phishing, etc). 23 The system should be capable to mitigate and detect both inbound and outbound traffic at shall accept connections only from Indian IPs. 24 Solution should provide real time Detection and protection from unknown Network DDoS attacks. 25 System should have mitigation mechanism to protect against zero- day DoS and DDoS attacks without manual intervention. 26 System should support horizontal and vertical port scanning behavioural protection 27 System supports behavioural-based application-layer HTTP DDoS protection 28 System supports DNS application behavioural analysis DDoS protection 29 System supports behavioural-based application-layer HTTP DDoS protection	7	In inline mode, system must not modify MAC or IP addresses of passed frames
Technical Requirements 10 System should support In-Line, SPAN Port, Out-of-Path deployment modes from day 1 11 System should support following environments: Symmetric, Asymmetric Ingress, Asymme Mesh 12 Solution should be transparent to control protocol like MPLS and 802.1 Q tagged VLAN environment. Also, it should be transparent to L2TP, GRE, IP in IP traffic. 13 The system should be transparent to 'logical link bundle' protocols like LACP 14 Solution should detect and mitigate IPv6/IPv4 Attacks 15 The DDoS detection capability of the solution must not be impacted by asymmetric traffic routing. 16 Solution should detect and Mitigate attacks from Layer 3 to Layer 7 17 Solution should support standard network MTU. 18 The system must allow protection parameters to be changed while a protection is running. System should Protect from multiple attack vectors on different layers at the same time wi combination of Network, Application, and Server-side attacks 20 Solution should provide protection for volumetric/Protocol and Application layer-based DDoS attacks 21 Inspection and prevention are to be done in same hardware 22 The system should be capable to mitigate and detect both inbound and outbound traffic ar shall accept connections only from Indian IPs. 23 Solution should provide real time Detection and protection from unknown Network DDoS attacks. 24 Solution should provide real time Detection and protection from unknown Network DDoS attacks. 25 System should have mitigation mechanism to protect against zero- day DoS and DDoS attacks without manual intervention. 26 System supports behavioural-based application-layer HTTP DDoS protection 27 System supports behavioural-based application-layer HTTP DDoS protection 28 System supports DNS application behavioural analysis DDoS protection 29 System supports DNS application behavioural analysis DDoS protection		
System should support In-Line, SPAN Port, Out-of-Path deployment modes from day 1 System should support following environments: Symmetric, Asymmetric Ingress, Asymme Mesh Solution should be transparent to control protocol like MPLS and 802.1 Q tagged VLAN environment. Also, it should be transparent to L2TP, GRE, IP in IP traffic. The system should be transparent to 'logical link bundle' protocols like LACP Solution should detect and mitigate IPv6/IPv4 Attacks The DDoS detection capability of the solution must not be impacted by asymmetric traffic routing. Solution should detect and Mitigate attacks from Layer 3 to Layer 7 Solution should support standard network MTU. The system must allow protection parameters to be changed while a protection is running. Such change must not cause traffic interruption System should Protect from multiple attack vectors on different layers at the same time with combination of Network, Application, and Server-side attacks Solution should provide protection for volumetric/Protocol and Application layer-based DDoS attacks Inspection and prevention are to be done in same hardware The system must have an updated threat feed that describes new malicious traffic (botnets phishing, etc). The system should be capable to mitigate and detect both inbound and outbound traffic ar shall accept connections only from Indian IPs. Solution should provide real time Detection and protection from unknown Network DDoS attacks. System should have mitigation mechanism to protect against zero- day DoS and DDoS attacks without manual intervention. System supports behavioural-based application-layer HTTP DDoS protection System supports DNS application behavioural analysis DDoS protection System supports DNS application behavioural analysis DDoS protection	9	
System should support following environments: Symmetric, Asymmetric Ingress, Asymme Mesh Solution should be transparent to control protocol like MPLS and 802.1 Q tagged VLAN environment. Also, it should be transparent to L2TP, GRE, IP in IP traffic. The system should be transparent to 'logical link bundle' protocols like LACP Solution should detect and mitigate IPv6/IPv4 Attacks The DDoS detection capability of the solution must not be impacted by asymmetric traffic routing. Solution should detect and Mitigate attacks from Layer 3 to Layer 7 Solution should support standard network MTU. The system must allow protection parameters to be changed while a protection is running. Such change must not cause traffic interruption System should Protect from multiple attack vectors on different layers at the same time wire combination of Network, Application, and Server-side attacks Solution should provide protection for volumetric/Protocol and Application layer-based DDoS attacks Inspection and prevention are to be done in same hardware The system must have an updated threat feed that describes new malicious traffic (botnets phishing, etc). The system should be capable to mitigate and detect both inbound and outbound traffic at shall accept connections only from Indian IPs. Solution should provide real time Detection and protection from unknown Network DDoS attacks. System should have mitigation mechanism to protect against zero- day DoS and DDoS attacks without manual intervention. System should support horizontal and vertical port scanning behavioural protection System supports behavioural-based application-layer HTTP DDoS protection System supports DNS application behavioural analysis DDoS protection System must be able to detect and block SYN Flood attacks and should support different mechanisms:		
Solution should be transparent to control protocol like MPLS and 802.1 Q tagged VLAN environment. Also, it should be transparent to L2TP, GRE, IP in IP traffic. The system should be transparent to 'logical link bundle' protocols like LACP Solution should detect and mitigate IPv6/IPv4 Attacks The DDoS detection capability of the solution must not be impacted by asymmetric traffic routing. Solution should detect and Mitigate attacks from Layer 3 to Layer 7 Solution should support standard network MTU. The system must allow protection parameters to be changed while a protection is running. Such change must not cause traffic interruption System should Protect from multiple attack vectors on different layers at the same time wi combination of Network, Application, and Server-side attacks Solution should provide protection for volumetric/Protocol and Application layer-based DDoS attacks Inspection and prevention are to be done in same hardware The system must have an updated threat feed that describes new malicious traffic (botnets phishing, etc). The system should be capable to mitigate and detect both inbound and outbound traffic at shall accept connections only from Indian IPs. Solution should provide real time Detection and protection from unknown Network DDoS attacks. System should have mitigation mechanism to protect against zero- day DoS and DDoS attacks without manual intervention. System supports behavioural-based application-layer HTTP DDoS protection System supports behavioural-based application-layer HTTP DDoS protection System must be able to detect and block SYN Flood attacks and should support different mechanisms:	10	
environment. Also, it should be transparent to L2TP, GRE, IP in IP traffic. The system should be transparent to 'logical link bundle' protocols like LACP Solution should detect and mitigate IPv6/IPv4 Attacks The DDoS detection capability of the solution must not be impacted by asymmetric traffic routing. Solution should detect and Mitigate attacks from Layer 3 to Layer 7 Solution should support standard network MTU. The system must allow protection parameters to be changed while a protection is running. Such change must not cause traffic interruption System should Protect from multiple attack vectors on different layers at the same time wi combination of Network, Application, and Server-side attacks Solution should provide protection for volumetric/Protocol and Application layer-based DDoS attacks Inspection and prevention are to be done in same hardware The system must have an updated threat feed that describes new malicious traffic (botnets phishing, etc). The system should be capable to mitigate and detect both inbound and outbound traffic are shall accept connections only from Indian IPs. Solution should provide real time Detection and protection from unknown Network DDoS attacks. System should have mitigation mechanism to protect against zero-day DoS and DDoS attacks without manual intervention. System should support horizontal and vertical port scanning behavioural protection System supports behavioural-based application-layer HTTP DDoS protection System must be able to detect and block SYN Flood attacks and should support different mechanisms:	11	
The DDoS detection capability of the solution must not be impacted by asymmetric traffic routing. Solution should detect and Mitigate attacks from Layer 3 to Layer 7 Solution should support standard network MTU. The system must allow protection parameters to be changed while a protection is running. Such change must not cause traffic interruption System should Protect from multiple attack vectors on different layers at the same time wi combination of Network, Application, and Server-side attacks Solution should provide protection for volumetric/Protocol and Application layer-based DDoS attacks Inspection and prevention are to be done in same hardware The system must have an updated threat feed that describes new malicious traffic (botnets phishing, etc). The system should be capable to mitigate and detect both inbound and outbound traffic are shall accept connections only from Indian IPs. Solution should provide real time Detection and protection from unknown Network DDoS attacks. System should have mitigation mechanism to protect against zero- day DoS and DDoS attacks without manual intervention. System should support horizontal and vertical port scanning behavioural protection System supports behavioural-based application-layer HTTP DDoS protection System supports DNS application behavioural analysis DDoS protection System must be able to detect and block SYN Flood attacks and should support different mechanisms:	12	
The DDoS detection capability of the solution must not be impacted by asymmetric traffic routing. 16 Solution should detect and Mitigate attacks from Layer 3 to Layer 7 17 Solution should support standard network MTU. 18 The system must allow protection parameters to be changed while a protection is running. Such change must not cause traffic interruption 19 System should Protect from multiple attack vectors on different layers at the same time wi combination of Network, Application, and Server-side attacks 20 Solution should provide protection for volumetric/Protocol and Application layer-based DDoS attacks 21 Inspection and prevention are to be done in same hardware 22 The system must have an updated threat feed that describes new malicious traffic (botnets phishing, etc). 23 The system should be capable to mitigate and detect both inbound and outbound traffic at shall accept connections only from Indian IPs. 24 Solution should provide real time Detection and protection from unknown Network DDoS attacks. 25 System should have mitigation mechanism to protect against zero- day DoS and DDoS attacks without manual intervention. 26 System should support horizontal and vertical port scanning behavioural protection 27 System supports behavioural-based application-layer HTTP DDoS protection 28 System supports DNS application behavioural analysis DDoS protection 29 System must be able to detect and block SYN Flood attacks and should support different mechanisms:	13	The system should be transparent to 'logical link bundle' protocols like LACP
routing. Solution should detect and Mitigate attacks from Layer 3 to Layer 7 The system must allow protection parameters to be changed while a protection is running. Such change must not cause traffic interruption System should Protect from multiple attack vectors on different layers at the same time with combination of Network, Application, and Server-side attacks Solution should provide protection for volumetric/Protocol and Application layer-based DDoS attacks Inspection and prevention are to be done in same hardware The system must have an updated threat feed that describes new malicious traffic (botnets phishing, etc). The system should be capable to mitigate and detect both inbound and outbound traffic at shall accept connections only from Indian IPs. Solution should provide real time Detection and protection from unknown Network DDoS attacks. System should have mitigation mechanism to protect against zero- day DoS and DDoS attacks without manual intervention. System should support horizontal and vertical port scanning behavioural protection System supports behavioural-based application-layer HTTP DDoS protection System must be able to detect and block SYN Flood attacks and should support different mechanisms:	14	Solution should detect and mitigate IPv6/IPv4 Attacks
17 Solution should support standard network MTU. 18 The system must allow protection parameters to be changed while a protection is running. Such change must not cause traffic interruption 19 System should Protect from multiple attack vectors on different layers at the same time wi combination of Network, Application, and Server-side attacks 20 Solution should provide protection for volumetric/Protocol and Application layer-based DDoS attacks 21 Inspection and prevention are to be done in same hardware 22 The system must have an updated threat feed that describes new malicious traffic (botnets phishing, etc). 23 The system should be capable to mitigate and detect both inbound and outbound traffic are shall accept connections only from Indian IPs. 24 Solution should provide real time Detection and protection from unknown Network DDoS attacks. 25 System should have mitigation mechanism to protect against zero- day DoS and DDoS attacks without manual intervention. 26 System should support horizontal and vertical port scanning behavioural protection 27 System supports behavioural-based application-layer HTTP DDoS protection 28 System must be able to detect and block SYN Flood attacks and should support different mechanisms:	15	
The system must allow protection parameters to be changed while a protection is running. Such change must not cause traffic interruption System should Protect from multiple attack vectors on different layers at the same time wi combination of Network, Application, and Server-side attacks Solution should provide protection for volumetric/Protocol and Application layer-based DDoS attacks Inspection and prevention are to be done in same hardware The system must have an updated threat feed that describes new malicious traffic (botnets phishing, etc). The system should be capable to mitigate and detect both inbound and outbound traffic are shall accept connections only from Indian IPs. Solution should provide real time Detection and protection from unknown Network DDoS attacks. System should have mitigation mechanism to protect against zero-day DoS and DDoS attacks without manual intervention. System should support horizontal and vertical port scanning behavioural protection System supports behavioural-based application-layer HTTP DDoS protection System must be able to detect and block SYN Flood attacks and should support different mechanisms:	16	Solution should detect and Mitigate attacks from Layer 3 to Layer 7
Such change must not cause traffic interruption System should Protect from multiple attack vectors on different layers at the same time wi combination of Network, Application, and Server-side attacks Solution should provide protection for volumetric/Protocol and Application layer-based DDoS attacks Inspection and prevention are to be done in same hardware The system must have an updated threat feed that describes new malicious traffic (botnets phishing, etc). The system should be capable to mitigate and detect both inbound and outbound traffic ar shall accept connections only from Indian IPs. Solution should provide real time Detection and protection from unknown Network DDoS attacks. System should have mitigation mechanism to protect against zero- day DoS and DDoS attacks without manual intervention. System should support horizontal and vertical port scanning behavioural protection System supports behavioural-based application-layer HTTP DDoS protection System must be able to detect and block SYN Flood attacks and should support different mechanisms:	17	Solution should support standard network MTU.
combination of Network, Application, and Server-side attacks Solution should provide protection for volumetric/Protocol and Application layer-based DDoS attacks Inspection and prevention are to be done in same hardware The system must have an updated threat feed that describes new malicious traffic (botnets phishing, etc). The system should be capable to mitigate and detect both inbound and outbound traffic at shall accept connections only from Indian IPs. Solution should provide real time Detection and protection from unknown Network DDoS attacks. System should have mitigation mechanism to protect against zero- day DoS and DDoS attacks without manual intervention. System should support horizontal and vertical port scanning behavioural protection System supports behavioural-based application-layer HTTP DDoS protection System must be able to detect and block SYN Flood attacks and should support different mechanisms:	18	The system must allow protection parameters to be changed while a protection is running. Such change must not cause traffic interruption
Solution should provide protection for volumetric/Protocol and Application layer-based DDoS attacks Inspection and prevention are to be done in same hardware The system must have an updated threat feed that describes new malicious traffic (botnets phishing, etc). The system should be capable to mitigate and detect both inbound and outbound traffic are shall accept connections only from Indian IPs. Solution should provide real time Detection and protection from unknown Network DDoS attacks. System should have mitigation mechanism to protect against zero-day DoS and DDoS attacks without manual intervention. System should support horizontal and vertical port scanning behavioural protection System supports behavioural-based application-layer HTTP DDoS protection System supports DNS application behavioural analysis DDoS protection System must be able to detect and block SYN Flood attacks and should support different mechanisms:	19	System should Protect from multiple attack vectors on different layers at the same time with combination of Network, Application, and Server-side attacks
The system must have an updated threat feed that describes new malicious traffic (botnets phishing, etc). The system should be capable to mitigate and detect both inbound and outbound traffic are shall accept connections only from Indian IPs. Solution should provide real time Detection and protection from unknown Network DDoS attacks. System should have mitigation mechanism to protect against zero- day DoS and DDoS attacks without manual intervention. System should support horizontal and vertical port scanning behavioural protection System supports behavioural-based application-layer HTTP DDoS protection System supports DNS application behavioural analysis DDoS protection System must be able to detect and block SYN Flood attacks and should support different mechanisms:	20	
phishing, etc). The system should be capable to mitigate and detect both inbound and outbound traffic ar shall accept connections only from Indian IPs. Solution should provide real time Detection and protection from unknown Network DDoS attacks. System should have mitigation mechanism to protect against zero- day DoS and DDoS attacks without manual intervention. System should support horizontal and vertical port scanning behavioural protection System supports behavioural-based application-layer HTTP DDoS protection System supports DNS application behavioural analysis DDoS protection System must be able to detect and block SYN Flood attacks and should support different mechanisms:	21	Inspection and prevention are to be done in same hardware
shall accept connections only from Indian IPs. Solution should provide real time Detection and protection from unknown Network DDoS attacks. System should have mitigation mechanism to protect against zero- day DoS and DDoS attacks without manual intervention. System should support horizontal and vertical port scanning behavioural protection System supports behavioural-based application-layer HTTP DDoS protection System supports DNS application behavioural analysis DDoS protection System must be able to detect and block SYN Flood attacks and should support different mechanisms:	22	The system must have an updated threat feed that describes new malicious traffic (botnets, phishing, etc).
attacks. System should have mitigation mechanism to protect against zero- day DoS and DDoS attacks without manual intervention. System should support horizontal and vertical port scanning behavioural protection System supports behavioural-based application-layer HTTP DDoS protection System supports DNS application behavioural analysis DDoS protection System must be able to detect and block SYN Flood attacks and should support different mechanisms:	23	The system should be capable to mitigate and detect both inbound and outbound traffic and
attacks without manual intervention. System should support horizontal and vertical port scanning behavioural protection System supports behavioural-based application-layer HTTP DDoS protection System supports DNS application behavioural analysis DDoS protection System must be able to detect and block SYN Flood attacks and should support different mechanisms:	24	Solution should provide real time Detection and protection from unknown Network DDoS attacks.
27 System supports behavioural-based application-layer HTTP DDoS protection 28 System supports DNS application behavioural analysis DDoS protection 29 System must be able to detect and block SYN Flood attacks and should support different mechanisms:	25	
28 System supports DNS application behavioural analysis DDoS protection 29 System must be able to detect and block SYN Flood attacks and should support different mechanisms:	26	System should support horizontal and vertical port scanning behavioural protection
System must be able to detect and block SYN Flood attacks and should support different mechanisms:	27	System supports behavioural-based application-layer HTTP DDoS protection
mechanisms:	28	System supports DNS application behavioural analysis DDoS protection
1	29	
30.1 SYN Protection - Transparent Proxy/out of sequence	30.1	SYN Protection - Transparent Proxy/out of sequence
30.2 SYN Protection - Safe Reset	30.2	SYN Protection - Safe Reset
30.3 SYN Protection /TCP Reset.	30.3	SYN Protection /TCP Reset.
31 System must be able to detect and block HTTP GET Flood and should support mechanism to avoid False Positives	31	System must be able to detect and block HTTP GET Flood and should support mechanisms to avoid False Positives
32 Should support following HTTP flood Mechanism:	32	Should support following HTTP flood Mechanism:
32.1 High Connection Rate	32.1	High Connection Rate
32.2 High rate GET to page	32.2	High rate GET to page
32.3 High-rate POST to page	32.3	High-rate POST to page

	RCIL/ETender/22-23/SR/SC/LT/1
32.4	DDoS device should support for Burst Attack Mitigation and signature generation based on behaviour of Attack.
32.5	DDoS Device should support for Both Rate limiting and Behavioural Analysis.
33	System should detect and mitigate different categories of Network Attacks:
33.1	High-rate SYN request overall
33.2	High-rate ACK
33.3	High-rate SYN-ACK
33.4	Push ACK Flood
33.5	Ping Flood
33.6	Response/Reply/Unreachable Flood
34	System should provide zero-day attack protection based on learning baseline / behavioural analysis of normal traffic; zero-day attacks are identified by deviation from normal behaviour.
35	System should provide behavioural-DoS protection using automatic signature Generation in less than 20 seconds
36	System must be able to detect and mitigate traffic originating from malicious IP recently participated in DDoS attack campaign, TOR networks and Web Attackers. The solution should also have capability to restrict traffic originating from specific geo-location.
37	System should Protect from Brute Force and dictionary attacks.
38	System must be able to detect and block Zombie Floods
39	System must be able to detect and block ICMP, DNS Floods
40	The system must be able to block invalid packets including checks for : Malformed IP Header, Incomplete Fragment, Bad IP Checksum, Duplicate Fragment, Fragment Too Long, Short Packet, Bad TCP Packet, Short UDP Packet, Short ICMP Packet, Bad TCP/UDP Checksum, Invalid TCP Flags, Invalid ACK Number and provide statistics for the packets dropped
41	System should detect and Mitigate from Low/Slow scanning attacks
42	System should detect and mitigate from Proxy & volumetric Scanning
43	System should support dedicated DNS protection from DDoS
44	System should support suspension of traffic/blacklisting from offending source based on a signature/attack detection
45	System should support user customizable and definable filter
46	system should support malware propagation attacks
47	System should support anti-evasion mechanisms
48	System should support Intrusion Prevention from Known Attacks either on the appliance or through external appliance
49	System should have capability to allow custom signature creation
50	System should protect from DDoS attacks behind a CDN by surgically blocking the real source IP address
51	System should support Challenge-response (Layers 4 to 7) mechanisms without Scripts
52	System should support HTTP Challenge Response authentication without Scripts
53	System should support Polymorphic Challenge-Response mechanism without scripts
54	System should support DNS Challenge Response authentication : Passive Challenge, Active challenge Both without scripts

	RCIL/ETender/22-23/SR/SC/LT/1
55	System should have capability to integrate with SIEM solution
56	Should have ready API for SDN environment integration/Anti-DDOS system for attack mitigation in custom portal
57	The on-premises DoS device should have the capability to integrate with OEM owned cloud scrubbing centre for mitigating against volumetric DDoS attacks if required in future
58	Cloud Scrubbing should be from same OEM as on-premises device
59	Cloud Scrubbing should take attack statistics from on-premises device for effective mitigation
60	Cloud Signalling should include Attack footprint intelligence to ensure effective and fast mitigation
61	Cloud Scrubbing capacity should be of at least 8 Tbps of scrubbing capacity and must have India as one of the scrubbing centres for the OEM for meeting Indian Government guideline and compliance
62	Cloud Scrubbing should provide unlimited attack mitigation (no restriction based on attack traffic volume)
63	Scrubbing Centre diversion based on BGP, and DNS should both be supported
64	Cloud Scrubbing solution should have following certifications:
64.1	PCI-DSS v3.1 (Payment Card Industry Data Security Standard)
64.2	ISO/IEC 27001:2013 (Information Security Management Systems)
64.3	ISO/IEC 27032:2012 (Security Techniques Guidelines for Cyber security)
64.4	ISO 28000:2007 (Specification for Security Management Systems for the Supply Chain)
	Cyber Security Compliance, Reporting and Auditing
65	The system must support configuration via standard up to date web browsers. System user interface must be based on HTML
66	System must support CLI access over RS-232 serial console port, SSH.
67	The system must have a dedicated management port for Out-of-Band management
68	Management interfaces must be separated from traffic interfaces.
69	System management must not be possible on traffic interfaces, management interfaces must not switch traffic
70	System must have supporting tools for central monitoring
71	System must have concept of users / groups / roles
72	Management certificate must be possible to change
73	Proposed solution should have centralized management system and helps to manage, monitor, and maintain all DDoS Appliances from a device
74	Role/User Based Access Control should be available
75	Cyber Security Compliance Reports and logs – Forensic report should provide the following minimum key information
	I) Actions
	II) Attack ID
	III) Name of Attack
	IV) Destination ID
	IV) Destination IP
	V) Destination IP V) Destination Port

		RCIL/E1ender/22-23/5R/5C/L1/10					
	VII)	Top attack Protocol					
	VIII)	Risk classification					
	IX)	Source IP					
	X)	Top scanners					
	XI)	Top Attacks					
	XII)	Top Attacks by volume					
	XIII)	Attacks by threat category					
	XIV)	Top attack sources					
	XV)	Reporting of Protocol based Baseline					
	XVI) csv, html, e-mail	Proposed solution should be able to generate reports in format like – pdf, reports etc					
	XVII)	Real Time Signature created during attack for blocking the attacks					
	XVIII) connection rate	Traffic Bandwidth in terms of bps and pps for inbound and outbound					
	XIX)	Geo location-based attack details					
	The selected sys	tem integrator must ensure below activity:-					
76	i) Quarterly health check of hardware and software updates and patches by systematics integrator during the warranty period of the device						
	ii) Yearly	once health check of hardware and software update by OEM					
77	Integration with	RADIUS and TACACS+					
78		re their own Security research team to generate signature profile targeted at nust be updated weekly.					
79	OEM must have	local Cloud Scrubbing Capability so that it can be used in future if required					
80	_	solution must be of same OEM as of hardware vendor and not a 3rd party ed with hardware and supplied					
81	Post Attack Fore	ensics Analysis and Recommendations					
82	Quoted OEM she	ould have India TAC for local support					
83	OEM Should pro	ovide 2-day training to required team after deployment of device.					
	Certification / References						
84		oducts should be deployed in India at least with one Govt customer / PSU. of customer PO shall be submitted.					
85	OEM should be present as the dedicated DDoS solution in the market for last 5 years						
86	The Solution should be deployed and used by Internet service providers for DDoS mitigation in India						
88	Proposed solution from OEM	on should be with 3 (three) year comprehensive warranty with 24x7 support					
89	Proposed OEM s	should be Make in India compliant with Local content equal or above 80%.					
90	OEM should be j	present in the market for at least 5 years					

3.	RCIL/ETender/22-23/SR/SC/LT/105 pecifications for Management Server Hardware (Not in the scope of present tender)					

Chapter-IV

Form-1

OFFER LETTER

10,	
Executive Director,	
Railtel Corporation of India Ltd., 1-10-39 to 44, 6A, 6th Floor,	
Begumpet Airport Road, Opp. Shoppers Stop,	
BEGUMPET, HYDERABAD- 500 016, Telangana	
, , , , , , , , , , , , , , , , , , , ,	
Tender no: RCIL/ETENDER/22-23/SR/SC/LT/105 D	ATED 22-10-2022
I/We	have read the various conditions detailed in
tender documents attached here to and hereby agree t	o ABIDE BY THE SAID CONDITIONS. I/We also
agree to keep this tender open for acceptance for a per	
same and in default thereof, I/We will be liable for forfei	
of material and provide support as per Schedule of requ II at the rates quoted in the attached schedule and her	
within 60 days from the date of issue of Purchase Order	
Conditions of Contract and to carry out the supplies acc	
aid down by the RailTel for the present contract.	5
EMD for SOR (Supply and installation):	
2. A sum of Rsas an Account Payee	ENIVIDA Ref No dt
issued by in favor of RailTel C	Corporation India Ltd. Secunderabad is herewith
forwarded as "Earnest Money". The full value of Earne	
any other rights or remedies if, I/We withdraw or modi	ly the offer within validity period to that effect.
SIGN	NATURE OF SUPPLIER (S) with Seal
	Date:
CIONATUDE OF MUTNIESS CONTTRACTOR (S) ADDI	DECC
SIGNATURE OF WITNESS CONTTRACTOR (S) ADDI	(ESS
1.	
2.	
۷.	

PROFORMA FOR STATEMENT OF DEVIATIONS

(1) The following are the particulars of deviations from the requirements of the tender specification.

Clause	Deviation	Remarks
		(Including justification)

(2) The following are the particulars of deviations from the requirements of the instructions to Tenderers, General and Special Conditions of contract-

Clause	Deviation	Remarks
		(Including justification)

Signature and seal of the Manufacturer/Tenderer.

Note: Where there is no deviation, the statement should be returned duly signed with an endorsement indicating "No Deviations".

Form-3

PERFORMANCE BANK GURANTEE BOND (On Stamp Paper of Rs. One Hundred) (To be used by approved Scheduled Banks)

	Gumidelli	Towers, B		rport Road, (1-10-39 to 4 s Stop, Begur		
1.	(Herein	after	called	RailTel)	having	agreed (Hereinafter	to called	exempt "the said
	Contractor		the demand		terms and c	onditions of a		ement No. between
			• • • • • • • • • • • • • • • • • • • •		6	. (1	11 1	and
	Agreement conditions (Rshereinafter hereby und damage ca	") of securificontained in contained in cont	ty deposit for n the said Ag . We, as "the Bank ay the RailTel suffered or w	the due fulfill reement, or proceed to the comment.") at the request an amount no could be cause	ment by the same of a	(hereinafter aid Contractor Bank Guarante indicate the nonested by the RailT s contained in the contained in	(s) of the e for Rs. ame of Contra Against el by rea	terms and the Bank) actor(s) do any loss or son of any
2.						and our loca		
	the amount the RailTel be caused to or condition the said Ag due and pag	detail addr ts due and stating that o or suffere ns containe reement. A yable by the	ress of local payable under the amount of d by the Rail of d in the said on such demands and under the said of the	Bra or this Guarant is claimed is d Tel by reason of Agreement or and made on the this guarantee	nch with cod tee without any ue by way of l of breach by the by reason of the Bank shall be	le no.) do hereky demur, mere oss or damage e said Contraction Contractor(se conclusive as r liability under	by undert ly on der caused t or(s) of ar s) failure regards t	take to pay mand from o or would my of terms to perform he amount
3.	demanded suit or pro	notwithstar ceedings pe	nding any disp	oute or dispute any court or	es raised by the	pay to the Rail e Contractor(s) ing thereto our	/ Supplie	er(s) in any
	there unde payment. We,	n in full for reement an e of the said tifies that th by the said der the Gua e discharged	ce and effect d that it shall Agreement he terms and Contractor(s rantee is madd from all liab	/ Supplier(s) Bank f during the pe continue to b have been fully conditions of f) and according e on us in writ ility under this /e,	shall have no further agree the riod that woul e enforceable to paid and its control the said Agree agly discharges ing on or befor s Guarantee the	charge of our l claim against nat the Guarant d be taken for ill all the dues claims satisfied ment have bee this Guarantee e the (1) ereafter. (indi- ave the fullest	ee herein the perfo of the Rai or discha n fully an e. Unless 	aking such contained ormance of ilTel under arged or till id properly a demand
	consent an and conditi any of the pany of the our liability forbearance Contractor would, but	d without a ons of the A owers exer terms and or by reasone, act or on (s) or by an for this prontee will no	affecting in an agreement or cisable by the conditions related of any such mission on the y such matter vision, have expected to be discharged.	ty manner out to extend time RailTel again ating to the sa variation, or e part of RailT r or thing wha ffect of so reli	obligations he of to postponest the said condid Agreement extension to Tel or any industries which eving us.	ereunder to value for any time of tractor(s) and the and we shall not the said Control and the said Constitution are Constitution	ry any of or from ti o forbear ot be reli- ractor(s) RailTel relating	f the terms me to time or enforce eved from or for any to the said to sureties

Witness

1. Signature Name

(Indicate the name of the Bank)

2. Signature Name

RCIL/ETender/22-23/SR/SC/LT/105 Form-4

То				Dated:	••••
Executive Director,					
Railtel Corporation of India Ltd.,					
1-10-39 to 44, 6A, 6th Floor,					
Begumpet Airport Road, Opp. Shopp	ners Ston				
BEGUMPET, HYDERABAD- 500 01	-				
DEGUMPET, HTDERADAD- 300 01	o, relangana				
Subject: Manufacturer Authoriz	zation form (M	íAF) to M∕s	fo	or	• • • •
Ref: Tender No			••••		
Dear Sir,					
We, M/s, are establish	and reputed	l manufacturar	and complete pro	rider of	
	_		_		
(Product details),	naving	our	registered	omce	at
		• • • • • • • • • • • • • • • • • • • •			
We hereby authorize				,,	Office
	to p	participate in b	id and subseque	ntly upon award o	of the
bid to execute the supply and Inst	allation & Comr	nissioning of o	ar range of produ	ucts against your a	above
said bid.					
We further extend our warranty	for	vears for or	ur range of pro	ducts offered by	M/s
against the above-s		,, , , , , , , , , , , , , , , , , , , ,	g p		
against the above-s	aid bid.				
TTI 1:					
Thanking you,					
Best regards,					

Authorized Signatory