

Information to Bidder for the “Supply of Routers, Switches and other items through GeM for RailTel Customer ”

Ref: GeM Bid No. GEM/2021/B/1261218 dated: 04-06-2021

- The item/items in this bid should be quoted as per the technical specifications. *The details of the specifications along with consignee/site details are also available on website www.railtelindia.com*

(The technical specs which are not available on GeM portal for the required product, same will be uploaded in ATC as one time exercise. In future all the specs will be available on GeM portal.).

1. In the specification wherever support for a feature has been asked for, it will mean that the feature should be available without RailTel requiring any other hardware/software/licenses. Thus, all hardware/software/licenses required for enabling the support/feature shall be included in the offer. The technical specifications are mentioned in **Annexure-I**.
2. OEM or Authorized distributor/Partner of OEM should have a registered office in India to provide sales and 24x7 support in India. The certificate to this effect should be submitted. The bidder should be either OEM or his authorized dealer/distributor.
3. In case of the authorized distributor/partner certificate from the OEM to this effect should be submitted. If OEM is quoting then OEM should submit the certificate.
4. Equipment offered shall have complete data sheets and detailed description on OEM web sites.
5. Bidder shall submit the detailed BOM of the equipment offered duly verified and certified by the respective OEM.
6. GSTIN ID of vendor should be provided from where goods will be supplied.
7. **Delivery Period, Consignee Address and inspection**

7.1 Delivery Period: The supplier will have to supply the material within 60 days from the date of issue of confirmed PO. If material is not supplied within the approved delivery period then penalty of 0.5% of undelivered/uninstalled quantity per week to the maximum to the 10% of the contract value will be levied.

7.2 Consignee Address:

S.No.	Consignee	Consignee Address	RailTel Region	Items to be delivered
1	Sr.Manager/ Stores	RailTel Office, New Delhi	Northern Region	SOR Item 1: 36 nos. Full Qty of SOR-2 to SOR-11

2	Sr.Manager/ Jabalpur	RailTel Jabalpur	Office,	Western Region	SOR Item 1: 2 nos.
3	Sr.Manager/ Mumbai	RailTel Mumbai	Office,	Western Region	SOR Item 1: 5 nos.
4	Sr.Manager/ Secunderabad	RailTel Secunderabad	Office,	Southern Region	SOR Item 1: 3 nos.
5	Sr.Manager/ Bengaluru	RailTel Bengaluru	Office,	Southern Region	SOR Item 1: 2 nos.
6	Sr.Manager/ Chennai	RailTel Chennai	Office,	Southern Region	SOR Item 1: 1 nos.
7	Sr.Manager/ Guwahati	RailTel Guwahati	Office,	Eastern Region	SOR Item 1: 1 nos.
8	Sr.Manager/ Kolkata	RailTel Kolkata	Office,	Eastern Region	SOR Item 1: 1 nos.
9	Sr.Manager/ Patna	RailTel Office, Patna		Eastern Region	SOR Item 1: 1 nos.

7.3 Inspection: Inspection will be carried out by authorised representative of RailTel.

8. Estimated cost of tender & Earnest Money Deposit (EMD)/ Bid Security:

8.1 Estimated cost of tender: Estimated cost of the Tender is Rs. **34,84,020/-** (Incl. GST).

8.2 Earnest Money Deposit (EMD)/ Bid Security: Rs. 69,680/- in the form of Pay Order/ Demand Draft drawn in favor of RailTel Corporation of India Ltd. payable at New Delhi on or before 15:00 Hrs of **DD/MM/YYYY (Bid Opening Date)**. The Bid received without EMD will be summarily rejected.

8.3 In addition to clause 8.2 above, Tenderer has an option for online submission of EMD also. The EMD should be remitted in following account of RailTel Corporation of India Limited before the stipulated time and date of bid submission:

Name of bank & address	State Bank of India, Rail Bhawan, Rafi Marg, New Delhi -01
Name of Account holder	RailTel Corporation of India limited
Account No.	38500762345
IFSC Code	SBIN0003771
Branch Code	3771

9. This bid complies with “Public Procurement (preference to make in India) Policy Order, 2017 issued by DIPP and Public Procurement Policy for Micro and Small Enterprises (MSEs) order, 2012” issued by MoSME.”

The bidders claiming the preference have to submit relevant documents prescribed under relevant order.

10. Security Deposit/Performance Bank Guarantee:

The successful tenderer shall submit security deposit in the form of DD/irrevocable BG from any scheduled bank for due fulfillment of contract as per the details given below:

i. Security Deposit/Performance Bank Guarantee @ 3% of total value of Purchase Order is required to be submitted within 30 days of issue of Purchase Order with validity of 3 months beyond warranty period, failing which a penal interest of 15% per annum shall be charged for the delay period i.e. beyond 30 (thirty) days from the date of issue of LOA/PO.

ii. The security deposit/PBG shall be submitted to RCIL/RO/NR, Shastri Park, Delhi.

iii. 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 security deposit/Performance Bank Guarantee shall be released after successful completion of Contract obligations under the contract, duly adjusting any dues recoverable from the successful tenderer. Payment of Security Deposit in the form of Pay Order/Demand Draft should be made in favor of “RailTel Corporation of India Ltd” payable at New Delhi.

Note: In case value of BG comes to Rs. 5 Lakhs or less, same should be submitted in the form of DD/Banker cheque only.

11. Eligibility Criteria for OEM (Routers and Switches):

- The Equipment offered by the OEM or equipment of the same series/family from the same OEM should have been satisfactorily working in Government/PSUs/Telecom Service Providers network for at least 12 months as on opening of bid, in India or Abroad. The certificates from the actual users will have to be submitted online.
- The OEM should have supplied at least 35% of the tendered quantity of the equipment offered or equipment of the same series/family during last preceding 3 financial years (i.e. current year and three previous financial years) as on opening of bid to Government/PSUs/Telecom Service Providers. OEM should submit self-certificate with proper contact detail of clients along with quantities supplied (Firm Name, Contact person, Designation, Telephone Number, Fax, Official mail id etc.). The same should be issued by authorized signatory.

- The OEM should have proven facilities for Engineering, manufacture, assembly, integration and testing of **Routers and Switches** and basic facilities with respect to space, Engineering, Personnel, Test equipment, Manufacture, Training, Repair, Service Center Supports for at least past three years in the country from where the proposed equipment are planned to be supplied. In case OEM is located outside India, it should have training repair and service center facilities in India also. The certificates/Undertaking for the same will have to be submitted online.

(The bidder will have to submit the proof of establishment for the facility)

12. Eligibility Criteria:

12.1 Technical Eligibility for Bidder:

The tenderer must have successfully completed any of the following during last 07 (seven) years, ending last day of month previous to the one in which tender is invited:

- Three similar works# each costing not less than the amount equal to **30%** of advertised value of the tender, or
- Two similar works# each costing not less than the amount equal to **40%** of advertised value of the tender, or
- One similar work # each costing not less than the amount equal to **60%** of advertised value of the tender.

Similar Work# Supply /Supply and installation of Router/Switches.

Note: Work experience certificate from private individual shall not be considered. However, in addition to work experience certificates issued by any Govt. Organization, PSU or any reputed TELCO, work experience certificate issued by Public listed company having average annual turnover of Rs 500 crore and above in last 3 financial years excluding the current financial year, listed on National Stock Exchange or Bombay Stock Exchange, incorporated/registered at least 5 years prior to the date of opening of tender, shall also be considered provided the work experience certificate has been issued by a person authorized by the Public listed company to issue such certificates. In case tenderer submits work experience certificate issued by public listed company, the tenderer shall also submit along with work experience certificate, the relevant copy of work order, bill of quantities, bill wise details of payment received duly certified by Chartered Accountant, TDS certificates for all payments received and copy of final/last bill paid by company in support of above work experience certificate

12.2 Financial Criteria for Bidder:

The tenderer must have received contractual payments in the previous three financial years and the current financial year up to the date of inviting of tender, at least 150% of the advertised value of the tender. The tenderers shall submit Certificates to this effect which may be an attested Certificate from the concerned department / client or Audited Balance Sheet duly certified by the Chartered Accountant/Certificate from Chartered Accountant duly supported by Audited Balance Sheet. (Note: Client certificate from other than Govt. Organization should be duly supported by Form 16A/26AS generated through TRACES of Income Tax Department of India).

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

12.3 Bidder should have authorization specific to this tender from respective OEM (Router and Switch) as per Annex-III.

13. Splitting of Quantity:

13.1 Deleted

13.2 In case bidder claims PMA, Government of India Guideline/Instruction regarding splitting of order to Local supplier shall be applicable. Govt. Guidelines in regard to MSME shall be followed.

14. Warranty:

14.1 The materials are to be warranted for **3 years** from date of delivery to the consignee. The tenderer shall warrant that store to be supplied shall be new and free from all defects and faults in material, workmanship and manufacturing and shall be of the highest grade and consistent with the established and generally accepted standards of materials of the type ordered and shall perform in full conformity with the specifications and drawings.

The supplier shall be responsible for any defects that may develop under the conditions provided by the contract and under proper use, arising from faulty materials, design or workmanship such as corrosion, inadequate quantity of material to meet equipment requirements, inadequate contact protection, deficiencies in design and/ or otherwise and shall remedy such defects at his own cost when called upon to do so by the Purchaser who shall state in writing in what respect the stores are faulty.

14.2 SLA:

After having been notified of the defects / service requirement during warranty period, Seller has to complete the required Service / Rectification within time limit of max. 7 days. If the Seller fails to complete service / rectification within defined time limit, a penalty of 0.5% of Unit Price of the product shall be charged as penalty for each week of delay from the seller & upto max. of 100% of Unit Price of the product. Seller can deposit the penalty with the Buyer directly else the Buyer shall have a right to recover all such penalty amount from the Performance Security (PBG) or from the running bills.

15. Long Term Maintenance Support:

Tenderer (OEM) shall provide maintenance support after successful completion of the warranty obligations for a minimum period of 5 years. The long term maintenance support shall be comprehensive and include all hardware and software of equipment supplied against this contract. RailTel should be extended the benefits of periodical software patches/updates made by OEM on the system from time to time for equipment security/performance without any additional cost to RailTel.

Buyer reserves the right to enter into AMC @ 3.5% of ordered value of equipment before 30 days of expiry of warranty period. In case bidder refuses to enter into AMC, PBG will be forfeited. Separate agreement for AMC (Long term Maintenance Support) before expiry of warranty period shall be entered into with OEM/the authorized partner of OEM by RailTel. A fresh Bank Guarantee valid for Five years and four months for 3% of the Long Term Maintenance Support cost of five years, shall be required to be submitted by bidder for due fulfillment of long term maintenance support obligation. Quarterly payment for AMC Charges would be made by RailTel after successful completion of AMC Services of that quarter and on the certificate furnished by concerned RailTel representative.

Note: The acceptance of the above clause is mandatory and specific acceptance from OEM is required to be enclosed as per Annexure-II. Any deviation / non acceptance will lead to rejection of the bid.

16. Payment Conditions :-

- (i) 100% payment against full supply.
- (ii) 80% payment against part supply. In case bidder completes the supply order for one SOR, he can claim part payment of 80% against each SOR's completed supply of the said SORs. Balance payment shall be made after full supply. The following documents are to be submitted for payment:
 - Original Tax Invoice. (With separate Tax amount, containing POS, RailTel GSTN and Supplier GSTN).
 - Delivery Challan.
 - Original Consignee receipt with GRN No.
 - Original Inspection Certificate.
 - Transit Insurance Certificate.
 - Warranty Certificate of OEM.
 - Copy of BG submitted.
 - Certificate of receipt of Goods in good condition & installation thereof from RailTel.

17. The tenderers shall submit a notarized affidavit on a non-judicial stamp paper stating that they are not liable to be disqualified and all their statement/documents submitted along with bid are true and factual. Standard format of the affidavit to be submitted by the bidder is enclosed as **Annexure-IV. Non submission of an affidavit by the bidder shall result in summarily rejection of his/their bid.** And it shall be mandatorily incumbent upon the tenderer to identify, state and submit the supporting **documents duly self attested** by which they/he is qualifying the Qualifying Criteria mentioned in the Tender Document. It will not be obligatory on the part of Tender Committee to scrutinize beyond the submitted document of tenderer as far as his qualification for the tender is concerned.

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

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

18. On line Submissions:

The bidder is required to upload and submit the following documents on line before due date & time of bid. The due date & time for closing of the bid is ____ Hrs of __.__.____ and the bid will be opened at ____ Hrs of __.__.____.

- (i) EMD
- (ii) BOQ of offered equipment.
- (iii) Clause wise compliance along with all mentioned documents/annexures for all clauses of GeM Bid and ATC documents.
- (iv) Data Sheet of offered equipment.
- (v) Financial (Certified copies of audited balance sheets/annual reports of last three preceding financial years) and Technical Eligibility Criteria documents.
- (vi) Technical Compliance of all Specification of items as per GeM Bid and ATC documents.
- (vii) Certificate from the End user against the Eligibility criteria for OEM para 10.
- (viii) Proof of document required against Eligibility criteria of OEM and Bidder vide para 11 & 12 respectively.
- (ix) deleted.
- (x) MAF/OEM Authorization as per Annexure-III.
- (xi) **Notarized affidavit on a non-judicial stamp paper as per Annexure-IV.**

Note: 1) The bidder is required to give acceptance of all the clauses mentioned in the **“Information to the Bidders”** document is mandatory. Any deviation / non-acceptance may lead to rejection of the bid.

2) Information to Bidder viz. corrigendum /addendum/ amendments etc. for this bid shall be posted on www.railtelindia.com only.

3) This bid is governed by the Specific Additional Terms & Conditions and General Terms & Conditions laid down by the GeM against **GeM Bid No: _____**.

In case, If any contradiction between GeM Additional Terms & Conditions and General Terms & Conditions, RailTel Terms & Conditions will prevails.

Technical Specifications**1. All Equipment should be:**

- i. With 3 years warranty & 5 years AMC.
- ii. Equipped with necessary hardware/software to comply all above required / support features.
- iii. Back-to-Back warranty with respective OEMs for both Hardware and Software. The certificates/Undertaking for the same will have to be submitted along with bid from respective OEM.
- iv. OEM (Router and Switch) should have its Service Centre at min 04 locations in major cities in India. Service center details to be shared along with address and contact no. and person.
- v. UL, CE and FCC Certification is not required for PMA. However, they have to produce certificate from standard lab approved/ authorized by Govt. of India that their product are equivalent to UL,CE and FCC and meets all standard and specification of UL,CE and FCC.

2. SOR wise details are as:

SOR	Item Description	Unit	Qty.
SOR-1	Router Type-I as per technical specifications of SOR-1 of Information to Bidder	Nos.	52
SOR-2	Router Type-II as per technical specifications of SOR-2 of Information to Bidder	Nos.	4
SOR-3	Switches Type-I as per technical specifications of SOR-3 of Information to Bidder	Nos.	40
SOR-4	Switches Type-II as per technical specifications of SOR-4 of Information to Bidder	Nos.	11
SOR-5	1G 10 km Single Fiber, single mode with LC connector as per technical specifications of SOR-5 of Information to Bidder	Nos.	102
SOR-6	1G 10 km Dual Fiber, single mode with LC connector as per technical specifications of SOR-6 of Information to Bidder	Nos.	36
SOR-7	10G 10 km Single Fiber, single mode with LC connector as per technical specifications of SOR-7 of Information to Bidder	Nos.	48
SOR-8	10G 10 km Dual Fiber, single mode with LC connector as per technical specifications of SOR-8 of Information to Bidder	Nos.	4
SOR-9	Supply of Telecom Rack (9 U 19", wall mountable with PDU & Fan) as per technical specifications of SOR-9 of Information to Bidder	Nos.	40
SOR-10	Patch cord-SC/APC-LC/PC-5 mtr.. as per technical specifications of SOR-10 of Information to Bidder	Nos.	160
SOR-11	Patch cord-LC/PC-LC/PC , 5mtr. as per technical specifications of SOR-11 of Information to Bidder	Nos.	160

SOR-1: Router Type-I

SN	Description
1	Architecture:
1.1	Proposed Routers should support SDWAN ready
1.2	The router should be a single box configuration for ease of management.
1.3	It shall support hardware based VPN (3DES/AES) Encryption, MD5, SHA, SHA-256
1.4	The router shall support complete Firewall features.
1.5	Router shall support minimum 100K IPv4 and 50K IPv6 routes.
1.6	The Router shall have enough "High-performance multicore processors capacity and 4 GB DRAM and 4GB Flash Memory from Day1. so as to efficiently meet all the functionalities laid down in the specifications.
1.7	It shall have integrated USB port.
1.8	It shall be supplied with necessary power cards, data cables, connectors, bracket accessories, wire managers and other appropriate accessories.. Routers shall be capable of working with 110 – 240 Volts AC nominal at frequency 50 +/- 2 Hz.
2	Performance:
2.1	It shall support high performance traffic forwarding with con-current features like firewall and encryption.
2.2	Router shall support aggregate WAN throughput of 100 Mbps and IPSEC Throughput of 50 Mbps from Day-1
2.3	It shall support variety of Ethernet Interfaces – 1 RJ45 GigE and 1 SFP GigE port & 4 port LAN 10/100/1000 Mbps port.
2.4	It shall support other IP Services like GRE tunneling, ACLs, IPSEC VPNs, Firewalling, NAT services.
3	High Availability:
3.1	It shall support non-stop forwarding for fast re-convergence of routing protocols.
3.2	It shall support VRRP or equivalent
4	Protocol Support:
4.1	The router shall have routing protocols like IS-IS, RIP ver1 & RIP Ver.2, OSPF ver2, BGP4.
4.2	It shall support multicast routing protocols IGMPv1/ v2/v3, PIM
4.3	It shall support DHCP, IPv6 QoS and IPv6 Multicast, OSPFv3

5	Quality of Service (QoS) Features:
5.1	The router shall support the following:
5.1.1	Classification and Marking: Policy based routing, IP Precedence, DSCP.
5.1.2	Congestion Management: WRED, Priority queuing, Class based weighted fair queuing.
5.1.3	Traffic Shaping and Policing for QoS
6	Security Features:
6.1	The router shall support GRE Tunneling & NAT Services.
6.2	It shall support MD-5 route authentication
6.3	It shall support AAA support using Radius.
6.4	It shall support DoS prevention
6.5	It shall support IP Access list to limit Telnet and SNMP access to router.
6.6	It shall support multiple privilege level authentications for console and telnet access through Local database or through an external AAA Server.
6.7	It shall support IEEE 802.1x support for MAC address authentication.
7	Debug, Alarms & Diagnostics:
7.1	The router shall have display of input and output error statistics on all interfaces.
7.2	It shall have display of dynamic ARP table.
7.3	Trace-route, Ping and extended Ping shall be available.
7.4	It shall support extensive support for SLA monitoring for metrics like delay, latency, jitter, packet loss
8	Accounting:
8.1	The router shall have following accounting features:
8.1.1	Packet & Byte Counts.
8.1.2	Start Time Stamp & End Time Stamps.
8.1.3	Network Time Protocol.
8.1.4	Input & Output interface ports.
8.1.5	Type of service, TCP Flags & Protocol
8.1.6	Source & Destination IP addresses
8.1.7	Source & Destination TCP/UDP ports
9	Management:

9.1	The router shall have support for CLI, Telnet and SNMPv3.
9.2	It shall support Secure Shell for secure connectivity.
9.3	It shall have to have dedicated console for Local management / login through USB port / RJ45 port / serial
9.4	Event and System logging: Event and system history logging functions shall be available. The Router shall generate system alarms on events. Facility to put selective logging of events onto a separate hardware where the analysis of log shall be available.
10	Certification Requirements:
	"Router/ Router OS should be tested and certified for EAL 2 / NDPP (Network Device Protection Profile) or above under Common Criteria Program for security related functions or under Indian Common Criteria Certification Scheme (IC3S) by STQC, DEIT, Govt. of India."

SOR-2: Router Type-II

SN	Description
1	Architecture:
1.1	Proposed Routers should support SDWAN ready
1.2	The router should be a single box configuration for ease of management.
1.3	It shall support hardware based VPN (3DES/AES) Encryption, MD5, SHA, SHA-256
1.4	The router shall support complete Firewall features.
1.5	Router shall support minimum 100K IPv4 and 50K IPv6 routes.
1.6	The Router shall have enough "High-performance multicore processors capacity and 4 GB DRAM and 4GB Flash Memory from Day1. so as to efficiently meet all the functionalities laid down in the specifications.
1.7	It shall have integrated USB port.
1.8	It shall be supplied with necessary power cards, data cables, connectors, bracket accessories, wire managers and other appropriate accessories.. Routers shall be capable of working with 110 – 240 Volts AC nominal at frequency 50 +/- 2 Hz.
2	Performance:
2.1	It shall support high performance traffic forwarding with con-current features like firewall and encryption.
2.2	Router shall support aggregate WAN throughput of 200 Mbps and IPSEC Throughput of 150 Mbps from Day-1

2.3	It shall support variety of Ethernet Interfaces – 1 RJ45 GigE and 1 SFP GigE port & 4 port LAN 10/100/1000 Mbps port.
2.4	It shall support other IP Services like GRE tunneling, ACLs, IPSEC VPNs, Firewalling, NAT services.
3	High Availability:
3.1	It shall support non-stop forwarding for fast re-convergence of routing protocols.
3.2	It shall support VRRP or equivalent
4	Protocol Support:
4.1	The router shall have routing protocols like IS-IS, RIP ver1 & RIP Ver.2, OSPF ver2, BGP4.
4.2	It shall support multicast routing protocols IGMPv1/ v2/v3, PIM
4.3	It shall support DHCP, IPv6 QoS and IPv6 Multicast, OSPFv3
5	Quality of Service (QoS) Features:
5.1	The router shall support the following:
5.1.1	Classification and Marking: Policy based routing, IP Precedence, DSCP.
5.1.2	Congestion Management: WRED, Priority queuing, Class based weighted fair queuing.
5.1.3	Traffic Shaping and Policing for QoS
6	Security Features:
6.1	The router shall support GRE Tunneling & NAT Services.
6.2	It shall support MD-5 route authentication
6.3	It shall support AAA support using Radius.
6.4	It shall support DoS prevention
6.5	It shall support IP Access list to limit Telnet and SNMP access to router.
6.6	It shall support multiple privilege level authentications for console and telnet access through Local database or through an external AAA Server.
6.7	It shall support IEEE 802.1x support for MAC address authentication.
7	Debug, Alarms & Diagnostics:
7.1	The router shall have display of input and output error statistics on all interfaces.
7.2	It shall have display of dynamic ARP table.
7.3	Trace-route, Ping and extended Ping shall be available.
7.4	It shall support extensive support for SLA monitoring for metrics like delay, latency, jitter, packet loss

8	Accounting:
8.1	The router shall have following accounting features:
8.1.1	Packet & Byte Counts.
8.1.2	Start Time Stamp & End Time Stamps.
8.1.3	Network Time Protocol.
8.1.4	Input & Output interface ports.
8.1.5	Type of service, TCP Flags & Protocol
8.1.6	Source & Destination IP addresses
8.1.7	Source & Destination TCP/UDP ports
9	Management:
9.1	The router shall have support for CLI, Telnet and SNMPv3.
9.2	It shall support Secure Shell for secure connectivity.
9.3	It shall have to have dedicated console for Local management / login through USB port / RJ45 port / serial
9.4	Event and System logging: Event and system history logging functions shall be available. The Router shall generate system alarms on events. Facility to put selective logging of events onto a separate hardware where the analysis of log shall be available.
10	Certification Requirements:
	"Router/ Router OS should be tested and certified for EAL 2 / NDPP (Network Device Protection Profile) or above under Common Criteria Program for security related functions or under Indian Common Criteria Certification Scheme (IC3S) by STQC, DEIT, Govt. of India."

SOR-3: Switch Type - I

SN	Specification
1	The switch should have minimum 24 x 10/100/1000BASE-T ports , 4 x 1G(minimum) SFP ports
2	Switching capacity should be 56 Gbps or better; forwarding rate 41.7 MPPS or better
3	Should have support for 802.3x flow control.
4	Should support 802.1D spanning tree control / RSTP support, flow or netflow
5	Should support management features like Web-based GUI, SNMP, TFTP Client, System Log, DHCP/BootP.

6	Should support Auto MDI-II/MDI-X uplink for all the twisted pair ports.
7	Should support 802.1Q VLAN, 802.1p Priority queues.
8	Should support port mirroring.
9	Should support jumbo frame.
10	Should support console port or telnet and web GUI based management.
11	Should have AC power supply arrangement as given below in chassis without any external adaptors with redundant power supply (RPS): AC power supply 100 to 240 V AC with 50 to 60 Hz.
12	Should support 16000 entries in MAC table.
13	Should support Port-based VLAN, 802.1Q Tagged VLAN & Voice VLAN along with Management VLAN.
14	Should support spanning-tree root guard or similar functionality.
15	Should support spanning-tree Port Fast guard for fast convergence or similar functionality
16	Should support security features like SSL (HTTPS)/SSH, Broadcast/Multicast/ Unicast Storm Control, DoS Attack Prevention.
17	Should support Quality of Service (QoS) like Priority Queue, Class of Service (CoS), Rate Limiting (Bandwidth Control), Strict Priority Queue (SPQ), Weighted Round Robin (WRR)/ Shaped Round Robin (SRR).
18	IPv6 feature should be ready from day 1.
19	Switch shall be with Rack Mountable clamps for standard 19-inch rack mountable.
20	Minimum Operating Temperature 0 to 50 degree.
21	Switch should support LLDP or similar functionality.
22	Switch should have EMI CERTIFICATE as per EN/FCC/IC/CE.
23	Switch should have SAFETY CERTIFICATE as per UL/ IEC/EN 60950
24	Switch should support following SNMP traps or syslog: <ul style="list-style-type: none"> i) Interface UP & Down ii) Optical Power SFP threshold alarms iii) STP Topology Changes and New root bridge iv) LLDP table changes v) Threshold alarms for Temperature

25	Should support following for min. 64 Groups: i) IGMP Snooping, ii) IGMP v1/v2/v3 awareness Snooping, iii) IGMP Snooping Queried
	Note: In the specification wherever support for a feature has been asked for, it will mean that the feature should be available without RailTel requiring any other hardware/software/licenses. Thus all hardware/software/licenses required for enabling the support/feature shall be included in the offer.

SOR-4: Switch Type-II

SN	Specification
1	Should have minimum 24 x GE SFP based ports.
2	Should have minimum 4 nos. SFP+ based 10 GE ports.
3	Should have at least 64 Gbps full duplex line rate traffic.
4	Should have support for 802.3x flow control.
5	Should support 802.1D spanning tree control/RSTP support and MSTP support.
6	Should support management features viz. Web-based GUI/SSH, SNMP, TFTP Client System Log.
7	Should support Auto MDI-II/MDI-X uplink for all the twisted pair ports.
8	Should support 802.1Q VLAN, 802.1p Priority queues.
9	Should support port mirroring, jumbo frame & should have at least 16K MAC address
10	Should support console port and telnet-based management.
11	<ul style="list-style-type: none"> Should have AC power supply arrangement as given below in chassis without any external adaptors with redundant power supply (RPS): AC power supply 100 to 240 V AC with 50 to 60 Hz
12	Should support Port-based VLAN, 802.1Q Tagged VLAN along with Management VLAN
13	Should support ITU-T G.8032 Ethernet Ring protection for Loop Protection and fast convergence time (Sub 50 ms) in ring topologies/ IEEE 802.1W RSTP for Sub Second failover. Industry Standard IEEE 802.1W RSTP is standard for Ring /STP topology.
14	Switch should support Surge Protection on power input and on Ethernet ports as per EN61000-4-5 standard and as per requirement at Indian Railway Station.

15	Should support Quality of Service (QoS) features viz. Priority Queue, Class of Service (CoS), Rate Limiting (Bandwidth Control), Strict Priority Queue (SPQ), Weighted Round Robin (WRR) or better, DOS attack prevention.
16	IPv6 feature should be ready from day 1.
17	Minimum Operating Temperature 0 to 50 degree.
18	It should have safety certificates as per UL/IEC/EN 60950. The switch should have EMC certification as per EN/CE/FCC standards.
19	Switch shall be with Rack Mountable clamps for standard 19-inch rack mountable.
20	The Switch shall be designed for continuous operations.
21	Should support port Trunking of at least 2 Nos. GE/10GE ports.
22	Switch should support LLDP or similar functionality.
23	Should support following security features viz.: i) SSL (HTTPS)/SSH, ii) Broadcast/Multicast/Unicast Storm Control, iii) DoS Attack Prevention/ DAI
24	Switch should support following SNMP traps or syslog i) Interface UP & Down ii) Optical Power SFP threshold alarms iii) STP Topology Changes and New root bridge iv) LLDP table changes
	Note :- In the specification wherever support for a feature has been asked for, it will mean that the feature should be available without RailTel requiring any other hardware/software/licenses. Thus all hardware/software/licenses required for enabling the support/feature shall be included in the offer.

SOR 5: SFP 1G 10 km Single Fiber, single mode with LC connector

SN	Description
1	SFP modules should comply with multi-source agreement (MSA), enabling compatibility with other vendors equipment Cisco, Juniper, D-Link, Zyxel, Edge Core, Extreme etc.
2	Should support 10 km optical distance on single fiber
3	Should have LC type connector.
4	Should have capacity of bidirectional transmission.
5	Should have 1 Gigabit Ethernet capacity on single mode fiber.
6	Should support DDMI feature.
7	OEM should be having valid ISO 9000 & ISO 14000 certification on the date of opening of bid.

8	Should have CE and FCC regulatory compliances.
9	Operating Temperature of the SFP Should be mini 0 to 65 °C (23 to 149 °F)

SOR 6: SFP 1G 10 km Dual Fiber

SN	Description
1	SFP modules should comply with multi-source agreement (MSA), enabling compatibility with other vendors equipment Cisco, Juniper, D-Link, Zyxel, Edge Core, Extreme etc.
2	Should support 10 km optical distance (1550/1310 nm).
3	Should have LC type connector
4	Should have 1 Gigabit Ethernet capacities on single mode fiber.
5	Should support DDMI feature.
6	Should be having valid ISO 9000 & ISO 14000 certification on the date of opening of bid.
7	Should have CE and FCC regulatory compliances.
8	Operating Temperature of the SFP Should be mini 0 to 65 °C (23 to 149 °F)

SOR 7: SFP 10G 10 km Single Fiber

SN	Description
1	SFP modules should comply with multi-source agreement (MSA), enabling compatibility with other vendors equipment Cisco, Juniper, D-Link, Zyxel, Edge Core, Extreme etc.
2	Should support 10 km optical distance on single fiber
3	Should have LC type connector.
4	Should have capacity of bidirectional transmission.
5	Should have 10 Gigabit Ethernet capacity on single mode fiber.
6	Should support DDMI feature.
7	OEM should be having valid ISO 9000 & ISO 14000 certification on the date of opening of bid.
8	Should have CE and FCC regulatory compliances.
9	Operating Temperature of the SFP Should be mini 0 to 65 °C (23 to 149 °F)

SOR 8: SFP 10G 10 km Dual Fiber

SN	Description
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1	SFP modules should comply with multi-source agreement (MSA), enabling compatibility with other vendors equipment Cisco, Juniper, D-Link, Zyxel, Edge Core, Extreme etc.
2	Should support 10 km optical distance on dual fiber
3	Should have LC type connector.
4	Deleted
5	Should have 10 Gigabit Ethernet capacity on single mode fiber.
6	Should support DDMI feature.
7	OEM should be having valid ISO 9000 & ISO 14000 certification on the date of opening of bid.
8	Should have CE and FCC regulatory compliances.
9	Operating Temperature of the SFP Should be mini 0 to 65 °C (23 to 149 °F)

SOR 9: 9 U 19",wall mountable Telecom Rack

No.	Item	Description
1	Type	Closed Telecom Rack wall mounted
2	Dimension	500 mm(Height)X600mm(Width)X 600 mm(Depth)
3	Mounting	Rack should have wall mounting provision with heavy wall brackets and fasteners.
4	Front door	Rack should have front door tough and transparent glass fitted on MS/CRCA sheet on sides with Lock and key.
		MS/CRCA door plain having ventilation holes bottom side with dust filters.
5	Top & Bottom	Rack top and bottom should be MS/CRCA steel made with cable entry provision with glands at both side.
6	Fan module	Compact fan module of 90 CFM working on 230VAC 2nos.with each rack properly fitted atop of rack
7	Earthing Provision	Rack Should have earthing provisions.
8	Cable manager	1no.horizontal and 1no.vertical cable manager with cable loops to be provided with each rack.
9	Power Distribution Unit(PDU)	PDU is of 6 Sockets of branded make such as Havells or equivalent with 6Amp with switch.
10	Material used	CRCA/MS with Thickness varying from 1.6 Mm to 2.0 mm
11.	The rack should be fitted with one modem tray19"	
12.	The good quality powder coating light grey in colour shall be used for painting of the rack.	
13.	"RAILTEL along with Year" in bold and easily recognizable fonts should be written at the front top of the rack preferably in black or blue color.	

14.	OEM should have a valid ISO 9001 certification on the date of opening of bid.
15.	Rack should be minimum IP54 certified. Rack should also comply with EIA 310/DIN 41494 standards.

SOR 10: Patch cord-SC/APC-LC/PC-5 mtr & SOR 11: Patch cord-LC/PC-LC/PC , 5mtr

The Patch cords should be confirming to TEC NO.: **TEC/GR/TX OFJ-01/05/NOV-09 with latest amendment No. TEC/T/OFC-OFJ/155/2013**. However the Patch cords should have the following:

i) Operating Temperature: -40°C to +85°C.

ii) Insertion Loss:

- a) Insertion Loss of complete patch cord including adapter when tested from each direction in all conditions of operations: ≤ 0.3 dB
- b) Insertion Loss of Adaptors: ≤ 0.1 dB

iii) Return Loss for each connector of patch cord:

- a) Type-I FC-PC : ≥ 50 dB
- b) Type-II SC-PC : ≥ 50 dB
- c) Type-III SC-APC : ≥ 65 dB
- d) Type-IV LC : ≥ 50 dB
- e) E2K/APC : ≥ 60 dB

iv) The length and type of connector of each Patch Cord: As per SOR.

V) The connectors must be make of reputed OEMs 3M, Huber-Shuner, R&M, TE Connectivity/Raychem. any other CACT approved Manufacturer/s having a valid approval against specification number TEC/GR/TX/OFJ-01-NOV.09 for the tendered connected type.

vi) Connector Body:

- a) FC-PC : Ni plated brass body (Ni plating shall be as per BIS Standards)
- b) SC-PC & SC-APC : Engineering thermoplastic (Glass filled PBT: Polybutylene Terephthalate)
- c) LC : PEI (Polyetherimide)/ PPS (Polyphenylene Sulphide)

vii) Color of connector body:

- a) FC-PC connector: Ni plated Brass
- b) SC-PC connector: Blue
- c) SC-APC connector: Green
- d) LC connector: Blue

viii) Radius of curvature:

- a) FC-PC : 10 to 25 mm
- b) SC-PC : 10 to 25 mm
- c) SC-APC : 5 to 12 mm

- d) LC : 10 to 25 mm
- ix) Minimum bending radius of the cable:
 - a) Loaded : 50 mm
 - b) Unloaded : 30 mm

Annexure-II

PROFORMA FOR THE LONG-TERM MAINTENANCE SUPPORT (To be signed by the O.E.M.)

**Group General Manager/O&M
RailTel Corporation of India Ltd.**

Dated:

.....
.....
.....

I / We hereby confirm and accept that against RailTel Tender No. , there is a requirement of Long Term Maintenance Support as per Clause 15. We confirm that Long Term Maintenance Support shall be met by us directly or through Authorized partner, as the case may be based on contracts. I / We have gone through the requirement mentioned in the Tender document and shall provide services for the offered supply items.

(Signature of Firm's Authorized Officer)

Seal

Signature of witness:

1.
2.

Annexure-III

**Group General Manager/O&M
RailTel Corporation of India Ltd.**

Dated:

.....
.....
.....

**Subject: Manufacturer Authorisation form (MAF) to M/s for
.....**

Ref: GeM Bid No.....dated.....

Dear Sir,

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

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

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

Thanking you,
Best regards,

Authorised Signatory

Annexure-IV

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

(To be executed in presence of Public notary on non-judicial stamp paper of the value of Rs.100/- . The stamp paper has to be in the name of the tenderer)**

I.....(Name and designation)** appointed as the attorney/authorized signatory of the tenderer (including its constituents),
M/s._____ (hereinafter called the tenderer) for the purpose of the Tender documents for the work of _____
as per the tender No. _____ of (-----Railway), do hereby solemnly affirm and state on the behalf of the tenderer including its constituents as under:

- (xii) I/We the tenderer (s), am/are signing this document after carefully reading the contents.
- (xiii) I/we the tenderer(s) also accept all the conditions of the tender and have signed all the pages in confirmation thereof.
- (xiv) I/We hereby declare that I/We have downloaded the tender documents from electronic-tender portal. I/We have verified the content of the document from the website and there is no addition, no deletion or no alteration to the content of the tender document. In case of any discrepancy noticed at any stage i.e. evaluation of tenderers, execution of work or final payment of the contract, the master copy available with the railway Administration shall be final and binding upon me/us.
- (xv) I/We declare and certify that I/we have not made any misleading or false representation in the forms, statements and attachments in proof of the qualification requirements.
- (xvi) **I/We also understand that my/our offer will be evaluated based on the documents/credentials submitted alongwith the offer and same shall be binding upon me/us.**

(xvii) **I/We declare that the information and documents submitted alongwith the tender by me/us are correct and I/we are fully responsible for the correctness of the information and documents submitted by us.**

(xviii) I/We undersigned that if the certificates regarding eligibility criteria submitted by us are found to be forged/false or incorrect at any time during process for evaluation of tenders, it shall lead to forfeiture of the tender EMD besides banning of business for five year on entire IR. Further, I/we (*insert name of the tenderer*)** _____ and all my/our constituents understand that my/our offer shall be summarily rejected.

(xix) I/we also understand that if the certificates submitted by us are found to be false/forged or incorrect at any time after the award of the contract, it will lead to termination of the contract, alongwith forfeiture of EMD/SD and Performance Guarantee besides any other action provided in the contract including banning of business for five year on entire IR.

**DEPONENT
SEAL AND SIGNATURE
OF THE TENDERER**

VERIFICATION

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

**DEPONENT
SEAL AND SIGNATURE
OF THE TENDERER**

Place:

Dated:

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

Performa for Performance Bank Guarantee

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

In consideration of the RailTel Corporation of India Limited, Delhi IT Park , Block-III, 6TH Floor, Shastri Park, New Delhi-110053 (Herein after called RailTel) having agreed to exempt (Hereinafter called “the said Contractor(s)”) from the demand, under the terms and conditions of an Agreement No. dated made between and for (hereinafter called “ the said Agreement”) of security deposit for the due fulfillment by the said Contractor (s) of the terms and conditions contained in the said Agreement, or production of a Bank Guarantee for Rs. (Rs. only). We, (indicate the name of the Bank) hereinafter referred to as “ the Bank”) at the request of Contractor(s) do hereby undertake to pay the RailTel an amount not exceeding Rs. Against any loss or damage caused to or suffered or would be caused to or suffered by the RailTel by reason of any breach by the said Contractor(s) of any of the terms or conditions contained in the said Agreement.

1. We, Bank do hereby undertake to pay the amounts due and payable under this Guarantee without any demur, merely on demand from the RailTel stating that the amount is claimed is due by way of loss or damage caused to or would be caused to or suffered by the RailTel by reason of breach by the said Contractor(s) of any of terms or conditions contained in the said Agreement or by reason of the Contractor(s) failure to perform the said Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs.
1. We, bank undertake to pay to the RailTel any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) /

Supplier(s) in any suit or proceedings pending before any court or Tribunal relating thereto our liability under this present being, absolute and unequivocal.

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

We, Bank further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the RailTel under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till RailTel certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this Guarantee. Unless a demand or claim under the Guarantee is made on us in writing on or before the (1) We shall be discharged from all liability under this Guarantee thereafter.

We, We,
(indicate the name of Bank) Further agree with the RailTel that the RailTel shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the Agreement or to extend time of to postpone for any time or from time to time any of the powers exercisable by the RailTel against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension to the said Contractor(s) or for any forbearance, act or omission on the part of RailTel or any indulgence by the RailTel to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have affect of so relieving us.

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

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

Dated the day of 2021

for
(Indicate the name of the Bank)

Witness

1. Signature
 Name

1. Signature
 Name
