

| RFP Section | Page No. | RFP Clause | Query / Suggestion / Recommendation | Justification | RailTel Remarks |
|-------------|----------|---|--|---------------|---|
| | 19 | The PARTNER shall indemnify, defend and hold RailTel harmless from and against any losses, costs, expenses, damages of whatsoever nature which may be incurred or suffered by RailTel which arises out of or as a result from any breach of contract, warranty, tort (including negligence) or otherwise of PARTNER's obligation or agreement contained herein. | <p>14.2 - Indemnity: The PARTNER shall indemnify, defend and hold RailTel harmless from and against any losses, costs, expenses, damages of direct nature which may be incurred or suffered by RailTel which arises out of or as a result from</p> <p>A. for gross negligence or wilful misconduct due to action solely attributable to the Partner;</p> <p>B. For third party IPR infringement claims and for breach of Confidentiality obligations;</p> <p>C. For personal injury or death.</p> <p>Provided that the indemnification obligations shall be subject to following :-</p> <p>a) Immediate notice to be sent by the Indemnified party.</p> <p>b) Control of the defense of the claim by the indemnifying party.</p> <p>c) Assistance by the indemnified party in the defense at the expense of the indemnifying party.</p> <p>Neither party shall also not be liable to the other Party for any indirect, incidental, special or consequential loss or damages caused to the other Party, regardless whether such party has been informed of the possibility or the likelihood of such damages.</p> <p>Maximum limitation of liability of the Bidder under this Agreement and all other projects under this agreement in aggregate shall be limited to maximum of 100% of individual contract value only for the indemnity provisions mentioned above. In all other cases, the Bidders limitation of liability under this Agreement and all other projects in aggregate shall not exceed the annual contract value to Bidder under each individual contract or such amount agreed otherwise in this agreement, whichever is less.</p> | | EOI Conditions are very clear. No change is proposed. |
| | 54 | <p>In case any service is already operational and RailTel wants to acquire the assets and want to continue with the service then in such case RailTel may acquire the asset created by the SD WAN SERVICE PARTNER for delivery of service, on mutually agreed market value or depreciated value whichever is lower, and RailTel will have the first right of acceptance/refusal.</p> <p>The depreciated value of equipment – the net value of the equipment as determined by charging depreciation at rates specified in Companies Act of India, 2013 as amended from time to time under the Written Down Value method.</p> | This is not a practical proposition as this could result in equipment leasing transaction by Bidder. Hence suggest to delete this requirement. | | EOI Conditions are very clear. No change is proposed. |

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| | 3 | <p>Penalties:</p> <ul style="list-style-type: none"> • forfeiture of earnest money deposit of Rs.2 lacs and performance bank guarantee to be given to RailTel on case to case basis • recovery of excess charges from NMIT where alternate service provider is involved (up to 100% of contract value) • RailTel can determine the Penalty unilaterally and levy / adjust | <ul style="list-style-type: none"> • In case of severe breach of Agreement by NMIT, RailTel shall only terminate the agreement and shall not forfeit any EMD or PBG given to RailTel; • In case RailTel appoints any other service provider to perform the services by terminating agreement with NMIT, then the same shall be at the cost of RailTel only and RailTel shall not be entitled to recover any charges/ cost from NMIT; • RailTel cannot unilaterally determine and / or levy/ adjust any penalty amount on NMIT. All penalties shall be first discussed and mutually agreed between both the Parties. Penalties can be discussed on case to case basis on each project. • RailTel cannot unilaterally setoff any payments due to NMIT. This needs to be discussed and agreed upon between both the parties. | | <p>Clause not found in tender. EOI Conditions are very clear. No change is proposed.</p> |
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| | | Whether it is controller or manager based (controller or manager can be interchanged) | | | EOI Conditions are very clear. No change is proposed. |
| | | Having seperated control and data plane or having single console for management | | | |
| | | Either by SDWAN controller/manager or by SDN controller | | | |
| | | SDWAN functionality based on any platform (Router / Firewall / Load Balancer) | | | |
| | | Solution can be appliance based or software based | | | |
| Mandatory Criteria; iii Technical compliance of offered solution | 28 | SD WAN CPEs should support following interfaces:- i. Ethernet and Optical Ethernet ii. LTE,4G ,3G and 2G. iii. LAN Interfaces. | <p>Please change the clause to: "SD WAN solution should support following media:- i. Ethernet and Optical Ethernet ii. LTE,4G ,3G and 2G. iii. LAN Interfaces."</p> | <p>Inbuilt Interfaces like LTE, 4G, 3G on CPE devices have following challenges: 1. Signal issue as most of these devices are installed in server room 2. Restrict the customer to change the provider as there are compatibility challenges around it. Most of enterprise / PS customer receive this services in DSL form and generally service provider have DSL CPE included in it. Hence the offered SDWAN CPE should be able to leverage DSL devices to optimally utilise all medias like MPLS, DSL, etc</p> | EOI Conditions are very clear. No change is proposed. |
| Annexure B IV - Proposed Technical Compliance | 36 | Locations deployed with Direct Internet Access should be provide complete visibility against DNS attacks and should have capability to provide recursive DNS analysis feature. This DNS level security should protect against malware irrespective of ports and protocols used by malware (botnet, exploit kits driven by, phishing). | <p>Please change the clause to: Locations deployed with Direct Internet Access should be provide complete visibility against DNS attacks This DNS level security should protect against malware irrespective of ports and protocols used by malware (botnet, exploit kits driven by, phishing).</p> | Recursive DNS services is offered by specific OEM and hence could give undue advantage. Hence requesting the remove the section of clause. | Since this is not mandatory requirement . No change is proposed. |

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| Annexure B IV - Proposed Technical Compliance | 36 | Solution should support Network Optimization Functions TCP Flow Optimization Packet Duplication Forward Error Corrections | Please remove this clause | WAN optimisation is valid use case for location with low bandwidth, conversely SDWAN is about optimally utilise multiple WAN links by distributing traffic across these link as per defined policies. Hence requesting removal of clause | Since this is not mandatory requirement . No change is proposed. |
| Annexure B IV - Proposed Technical Compliance | 37 | Solution should support Virtual Router Redundancy Protocol (VRRP) (RFC 2338) for the dc sdwan routers. Both the routers and the available links should participate in application data forwarding in active/active fashion. | Please change the clause to: Solution should support Virtual Router Redundancy Protocol (VRRP) (RFC 2338) or equivalent for the dc sdwan devices. Both the devices and the available links should participate in application data forwarding in active/active fashion. | Since SDWAN Hub location is going to be Railtel DC/DR which already has router, hence router should not be mentioned as it could give undue advantage to OEM. Also, SDWAN central devices should be deployed in HA with mechanism supported which could be VRRP or other while achieving the functional requirement and hence requested change | Please see the corrigendum-III |
| Annexure B IV - Proposed Technical Compliance | 38 | System should able to support L3VPN, L2VPN and VPLS | Please remove this clause | As per Annexure C-1, objective of SDWAN is to provide seamless failover, greater BW and Enhanced user experience, provide secure network which could not be achieved using deprecated technologies like L3VPN, L2VPN and VPLS and hence requested the change such that SDWAN should be able to use these existing infrastructure | Since this is not mandatory requirement . No change is proposed. |
| Annexure B IV - Proposed Technical Compliance | | System should able to support IPv6 and IPv4 routing protocols like, BGP, OSPF and Static | Please remove the clause | This would defeat the purpose of SDWAN concept. SDWAN is to avoid all the complexity of routing protocol and fairly load balancing the traffic across multiple wan links using overlay network concept and hence requesting change | Since this is not mandatory requirement . No change is proposed. |
| Annexure A Technical compliances of offered solution: | 28 | SDWAN should be able to detect failover condition in milliseconds and must switch to available path without disrupting applications like CRM, ERP, UCaaS, virtual desktop sessions, and more. It should be applicable for both brownout and blackout condition. | Please remove this clause | This clause is specific OEM | EOI Conditions are very clear. No change is proposed. |
| Annexure B OEM Profile | 33 | The OEM of the Proposed Solution of SD WAN should have figured in any Gartner SD WAN Report of the last three years i.e. 2017, 2018 & 2019 report | Please change the clause to The OEM of the Proposed Solution of SD WAN should have figured in any Gartner SD WAN Report of the last two years i.e. 2018 & 2019 report | As Gartner SD WAN has been published for last 2 years only and hence requesting to change | Please see the corrigendum-III |

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| Annexure A OEM Experience | 27 | Given Solution of the Bidder should have the following features but should not be only limited to quick & error free deployment of routing equipment without much need of complex skill sets of routing, should be able to help RailTel's SP business by eliminating need to connect other service providers, should help customers to reduce number of service providers, , should be able to provide SLA that focus on productivity, should be able to provide security without any need to 3rd party security software, should be able to use community services, should be able to make optimal use of available bandwidth based on customer applications, manage entire network on the fly etc. | Please change the clause to: Given Solution of the Bidder should have the following features but should not be only limited to quick & error free deployment of SDWAN equipment without much need of complex skill sets of routing, should be able to help RailTel's SP business by eliminating need to connect other service providers, should help customers to reduce number of service providers, , should be able to provide SLA that focus on productivity, should be able to provide security with or without 3rd party security software, should not use community services, should be able to make optimal use of available bandwidth based on customer applications, manage entire network on the fly etc. | Security is a big concern for any organisation and hence having basic security which is not enterprise clause is not good enough. Hence allowing Partner to offer security solution either inbuilt or external would give flexibility and better participation to EOI | EOI Conditions are very clear. No change is proposed. |
| Annexure C-1 5. Synopsis on Scope of Work: | 47 | OEM should provide facilities of single toll-free no., single email and SMS across the country for logging complaints/service requests. A self-service portal for logging complaints/service requests and monitoring the status and progress of already logged complaints/service requests shall also be provided by the bidder. Bidder shall also share the escalation matrix for contract management | Please change the clause to: OEM should provide facilities of single toll-free no., single email or SMS across the country for logging complaints/service requests. A self-service portal for logging complaints/service requests and monitoring the status and progress of already logged complaints/service requests shall also be provided by the bidder. Bidder shall also share the escalation matrix for contract management | Most of OEM offer toll-free number and email services as mechanism to log complaints and hence requesting change | Please see the corrigendum-III |
| | | Clarification | Please confirm whether proposed CPE Edge device should support Fail-Open capability | This ensure connectivity remains up | EOI Conditions are very clear. No change is proposed. |
| | | Clarification | Please confirm whether proposed SDWAN solution should use multiple encryption keys between | This improves the security of tunnel and give less chance to attack to guess the key and compromise tunnel | EOI Conditions are very clear. No change is proposed. |
| | | Clarification | Please confirm whether proposed solution should visibility and management to custom applications identical to inbuilt/system applications | This would give customer a lever to handle application better | EOI Conditions are very clear. No change is proposed. |
| Annexure - D PART C: APPLICATION DETAILS | 60 | NIL Deviation Declaration | As per our understanding, NIL Deviation is for Section "Proposed Technical Compliance:" on page number 33 Annexure-B. Please confirm | To avoid ambiguity, please clarify what does NIL deviation means | Please see the corrigendum-III |
| Annexure - G | 64 | The OEM or authorized agency of the OEM to have service and repair facility in India directly/ Software suppliers should have their Technical Assistance Centre (TAC) present in India. | Please change the clause to: The OEM or authorized agency of the OEM to have service / replacement facility in India directly/Software suppliers should have their Technical Assistance Centre (TAC) present in India. | Most of the OEM replaces the faulty hardware with working as repairing would take couple of day which could impact user experience and hence requesting change | Please see the corrigendum-III |
| Annexure - G | 64 | Guarantee to provide long term technical, service and maintenance support to the bidder that may be required during installation and commissioning of the equipment up to the maintenance period. | Please change the clause to: Guarantee to provide long term technical, service and maintenance support to the bidder that may be required during installation and commissioning of the equipment up to the maintenance period, in accordance with the agreement between us and the Bidder | Bidders may add value by offering their services rather than buying from OEM and hence requesting change in clause | EOI Conditions are very clear. No change is proposed. |

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| Annexure - G | 64 | Guarantee to supply spares for a minimum period of Eight years for SD WAN solution from the date of commissioning. Guarantee to assure the continued support including all updates/bugfixes/ patches/upgrades on the supplied for the above period. | Please change the clause to: Guarantee to supply spares for a minimum period of Five years for SD WAN solution from the date of issuing order. Guarantee to assure the continued support including all updates/bugfixes/ patches/upgrades on the supplied for the above period. | Lifecycle of Hardware has reduced drastically because of fast innovation done by chip vendors and new capabilities added in software require more compute resources and hence hardware life is reduced to 3-5 years. Running same hardware for 8 years would mean not adoption new feature and exposure to vulnerabilities and hence requesting change | Please see the corrigendum-III |
| Annexure - G | 64 | We duly authorize the said firm to act on our behalf in fulfilling all installations, technical support and maintenance obligations required by the contract. | Please change clause to: We duly authorize the said firm to fulfil all installations, technical support and maintenance obligations required by the contract | Bidders may add value by offering their services rather than buying from OEM and hence requesting change in clause | EOI Conditions are very clear. No change is proposed. |
| Annexure - G | 64 | We further certify that, in case the authorized distributor/ system integrator/ bidder is not able to meet its obligations as per contract during contract period, we, as the OEM, shall perform the said obligations with regard to their items through alternate & acceptable service provider. | Please change the clause to: We further certify that, in case the authorized distributor/ system integrator/ bidder is not able to meet its obligations as per contract during contract period, we, as the OEM, shall support customer in finding an alternate & acceptable service provider perform the said obligations . | Bidders may add value by offering their services rather than buying from OEM and hence requesting change in clause. OEM will support Railtel in finding alternative partner and hence requesting change | EOI Conditions are very clear. No change is proposed. |
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| OEM Experience (Investment Protection) | 26 | The OEM should be compatible, robust & must have longevity to support and protect business interests of RailTel for next 5 years without any need to upgrade | Regular software upgrades are needed to keep the system free of bugs and up to date with latest features. Please confirm that upgrade here only refers to a "Complete System" upgrade and not referees to any regular software/patch/fix upgrade | Request to please change the clause to: The OEM should be compatible, robust & must have longevity to support and protect business interests of RailTel for next 5 years without any need to do a complete system upgrade | Please See Corrigendum-III |
| Technical compliances of offered solution | 28 | Mitigate single point of failure at the control plane, device, branch, ISP, and DC level | As headless forwarding is supported Geo-R is not needed. | Request to please change the clause to: Mitigate single point of failure at the control plane, device, branch and/or DC level | Please See Corrigendum-III |
| Technical compliances of offered solution | 28 | Future proofing the evolving landscape of application and user centric topologies | Request to please elaborate the use case. What is expected in multi-cloud integration ? | | Please See Corrigendum-III |
| Technical compliances of offered solution | 29 | Use any topologies as per business needs and change topologies-on-the-fly | Only standard Hub spoke, full and partial mesh topologies are supported. Arbitar topology support is not a standard deployment and has to be assessed case basis. ke | Request to please amend thee clause as: Flexible data plane topologies from full-mesh to partial-mesh & Hub-n- Spoke | Please See Corrigendum-III |
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| Technical compliances of offered solution | 29 | Flexible deployment models | On-Prem (Appliance/ VMWare/ OpenStack), Cloud controller deployment in commercial and GovCloud | Is a public cloud like AWS,Google, Azure acceptable as commercial clouds ? | Please See Corrigendum-III |
| Technical compliances of offered solution | 29 | Hybrid WAN connectivity over multiple WAN transport connections | Use any mode of connectivity provided by RailTel and other ISP | Please specify all CPE connectivity type provided by RailTel | Ethernet ,Optical Ethernet and LTE |

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| OEM Profile | 32 | | OEM should have more than one proven SDWAN/Security solution which has deployment in Public Sector/Government/departments/ Enterprises for 100 Sites for minimum working for more than 6 months. | It is our understanding that this clause is specific to reeferences in India. Please amend the clause as "OEM should have more than one proven SDWAN/Security solution which has deployment in Public Sector/Government/departments/ Enterprises in India for 100 Sites for minimum working for more than 6 months" | EOI Conditions are very clear. No change is proposed. |
| OEM Profile | 33 | ISO certifications: | The OEM of the Proposed Solution of SD WAN should have figured in any Gartner SD WAN Report of the last three years i.e. 2017, 2018 & 2019 report | Gartner covers SDWAN as part of its wan edge infra report. Please amend the clause as "The OEM of the Proposed Solution of SD WAN should have figured in any Gartner WAN EDGE INFRASTRUCTURE Report of the last three years i.e. 2017, 2018 & 2019 report" | Please See Corrigendum-III |
| Proposed Technical Compliance | 34 | | System should able to support of Scalability & High availability Architecture minimum 2000 locations in a single overlay. | By single overlay is it implied that 2000 sites/locations should be supported for a single tenant ? | Yes ,By single overlay is it implied that 2000 sites/locations should be supported for a single tenant. |
| Proposed Technical Compliance | 34 | | Solution should allow pushing of required policies to Control and Data plane independently from the management plane | Management cannot push policies independently to data plane. Polic has to be pushed from mgmt plane to control plane to data plane. Request to please amend the clause as: "Solution should allow pushing of required policies to Control and Data plane from the management plane" | Please See Corrigendum-III |
| Proposed Technical Compliance | 34 | | Solution should support cloud/on-prem controller. In either case, the functionality and features supported on should be identical. | Please confirm that by cloud controller it is not implied to be public cloud like AWS, Google & Azure but a centrally hosted controller | EOI Conditions are very clear. No change is proposed. |
| Proposed Technical Compliance | 34 | Redundancy | The solution should support redundancy of Control Plane and management plane irrespective of whether they are consumed from Cloud or deployed on-Prem and should support high availability with geo redundancy in DC & DR Setup | As headless forwarding is supported Geo-R is not needed. Request to please change the clause to: The solution should support redundancy of Control Plane and management plane irrespective of whether they are consumed from Cloud or deployed on-Prem and should support high availability Setup | Since this is not mandatory requirement . No change is proposed. |
| Proposed Technical Compliance | 35 | | System should be able to provide real time behavioural analytics and also provide predictive analysis of the application from network standpoint to avoid future outages | Behavior prediction is not a standard offering and is OEM specific. Request to please remove this clause. | Since this is not mandatory requirement . No change is proposed. |
| Proposed Technical Compliance | 35 | | Solution must have native strong secure communication mechanism between all solution components for securing control and data-plane traffic by default. | Request to please amend the clause as "Solution must have native strong secure public communication mechanism between all solution components for securing control and data-plane traffic by default." | Since this is not mandatory requirement . No change is proposed. |

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| Proposed Technical Compliance | 36 | | Locations deployed with Direct Internet Access should be provide complete visibility against DNS attacks and should have capability to provide recursive DNS analysis feature. This DNS level security should protect against malware irrespective of ports and protocols used by malware (bot- net, exploit kits driven by, phishing). | This is a DNS security feature that is not part of standard SDWAN offerings and will be OEM specific. Request to please remove this clause. | Since this is not mandatory requirement . No change is proposed. |
| Proposed Technical Compliance | 36 | | TCP Flow Optimization | This is OEM specific. Request to please remove | Since this is not mandatory requirement . No change is proposed. |
| Proposed Technical Compliance | 36 | | Packet Duplication | Session duplication results in BW watage and needs high processing at head end due to re-ordering. Leads to slowness and latency and therefore not recommended. Request to please remove this clause | Since this is not mandatory requirement . No change is proposed. |
| Proposed Technical Compliance | 36 | | Forward Error Corrections | This is in roadmap. Request to please allow roadmap items to be quoted and specified as such wherever feasabile | Since this is not mandatory requirement . No change is proposed. |
| Proposed Technical Compliance | 37 | | Applications Consuming Least Bandwidth | tracking application consuming least BW is not a standard practice, It is typical to track only applications consuming most BW. Request to please relax this clause | Since this is not mandatory requirement . No change is proposed. |
| Proposed Technical Compliance | 37 | System should be able to provide real time behavioral analytics at each WAN hop and also provide predictive analysis to avoid future outages. The system should centrally give the following information in relation to the Application's performance: | Anomalous Applications like applications using way more bandwidth then their baseline. | Behavior prediction is not a standard offering and is OEM specific. Request to please remove this clause. | Since this is not mandatory requirement . No change is proposed. |
| Proposed Technical Compliance | 37 | Network | Solution shall be able to support all the SD-WAN elements IPv6 Capable | This is in roadmap. Request to please allow roadmap items to be quoted and specified as such wherever feasabile | Since this is not mandatory requirement . No change is proposed. |
| Proposed Technical Compliance | 37 | High Availability | Solution should support Virtual Router Redundancy Protocol (VRRP) (RFC 2338) for the dc sdwan routers. Both the routers and the available links should participate in application data forwarding in active/active fashion. | Solution should have abilit to provide CPE redundancy, Diffeerent OEMs have different apprrroaches to solve CPE redundancy. As not all OEMs will use VRRP as a solution therefore it is request to relax this clause as it is OEM specific. | Please see the corrigendum-III |
| Proposed Technical Compliance | 37 | Scalabilit | The proposed SD WAN solution should be scalable to cater up to 10,000 locations each with dual transports. | Request to amend the clause as "The proposed SD WAN solution should be scalable to cater up to 6000 locations each with dual transports" | Since this is not mandatory requirement . No change is proposed. |
| Proposed Technical Compliance | 37 | Services and & Routing Features | System should able to support L3VPN, L2VPN and VPLS | In order to improve participation request to please amend the clause as "System should able to support L3VPN / L2VPN / VPLS" | Please see the corrigendum-III |
| Proposed Technical Compliance | 38 | Services and & Routing Features | System should able to support IPv6 and IPv4 over IPv6 tunnel | This is in roadmap. Request to please allow roadmap items to be quoted and specified as such wherever feasabile | Since this is not mandatory requirement . No change is proposed. |
| Proposed Technical Compliance | | Services and & Routing Features | System should able to support IPv6 and IPv4 routing protocols like, BGP, OSPF and Static | This is in roadmap. Request to please allow roadmap items to be quoted and specified as such wherever feasabile | Since this is not mandatory requirement . No change is proposed. |

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| Proposed Technical Compliance | 38 | Services and & Routing Features | System should able to support active active link load balancing and session duplication | Session duplication results in BW wastage and needs high processing at head end due to re-ordering. Leads to slowness and latency and therefore not recommended. Request to please remove this clause | Since this is not mandatory requirement . No change is proposed. |
| Proposed Technical Compliance | 42 | | Proposed cloud managed solution should have all Security of operation center certifications SAS70 type II / SSAE16 and ISO 27001 related to DC | As per clause (g) of the same section "Proposed cloud managed solution should have the SDWAN controller in RailTel DC" IF the cloud solution has to be installed in RailTel DC then it is our understanding that the current clause is applicability is deependent on RailTel DC meeting the mentioned ceertification requirments. Please confirm ? | Please see the corrigendum-III |
| Proposed Technical Compliance | 42 | | Proposed cloud managed solution should be fully HIPAA / PCI compliant | "As per clause (g) of the same section ""Proposed cloud managed solution should have the SDWAN controller in RailTel DC"" IF the cloud solution has to be installed in RailTel DC then it is our understanding that the current clause is applicability is deependent on RailTel DC meeting the mentioned ceertification requirments. Please confirm ?" | Please see the corrigendum-III |
| Synopsis on Scope of Work | 47 | OEM Scope Of Work | OEM will help RailTel to set-up a lab in its DC | Please confirm that the TEST Lab in RailTel is only for education and hand-on practice of RailTel tchnical team and not for acceptance testing. | TEST Lab will be use only for POC purpose . |
| Synopsis on Scope of Work | 47 | Scope of Installation and Commissioning | Bidder should Carry out installation of Controllers and centralized system for 1000 CPEs as per High-Level Architecture & Set-up of SDWAN and it should be free of cost of RailTel | Please confirm that this installation is different from the RailTel DC TEST Lab. Also acceptance testing will be performed only on tthis installation. | Bidder should Carry out installation of Controllers and centralized system for 1000 CPEs. Bidder can use same/different setup for Test LAB.it should be free of cost of RailTel |
| Synopsis on Scope of Work | 47 | Scope of Installation and Commissioning | The scope of installation, commissioning and system integration shall mean to install, configure and integrate the following (but not limited to), adhering to essential security measures. | Is there any requiremeent for Integration of Hub device with existing Railtel's MPLS infrastructure during deployment of SDWAN edge device. i.e if some of the customer sites are being moved to SDWAN then during deployment is this site expected to communicate with the other non-SDN sites of the same customer ? | Yes,This type of Integration of Hub device with existing Railtel's MPLS infrastructure is required. |
| Synopsis on Scope of Work | 47 | Scope of Installation and Commissioning | The scope of installation, commissioning and system integration shall mean to install, configure and integrate the following (but not limited to), adhering to essential security measures. | Pleease clarify any north bound integration that might be needed at either the TEST lab or the bidder lab with an exisiting NMS system | For LAB , It is not required |

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| Synopsis on Scope of Work | 47 | Scope of Installation and Commissioning | | If integration with existing system is needed please provide details of protocols required for E-Mail/SMS system and if required Ticketing system to be integrated with SDWAN | EOI Conditions are very clear. No change is proposed. |
| Synopsis on Scope of Work | 48 | Acceptance Testing | The Acceptance Tests for the sites shall be carried out in accordance to the scope, requirement, specifications and design principles mentioned in this document. | Please clarify which sites are being mentioned in this clause. It is our understanding that the central installation will be controller and hub only for supporting upto 1000 CPEs but no actual CPE has to be provided as part of this installation. The CPE will come only once the end customer business is acquired. What sites will the AT be done on ? or Is the AT to be expected for every end customer deployment ? | This will be only applicable for Controllers and centralized system supporting 1000 CPEs. |
| Synopsis on Scope of Work | 48 | Acceptance Testing | The Acceptance Tests for the sites shall be carried out in accordance to the scope, requirement, specifications and design principles mentioned in this document. | Acceptance Testing will be applicable for only the items for which the Bidder has submitted compliance. Any item for which the bidder has lost the associated points is assumed to be not part of the acceptance test. | Yes, Acceptance Testing will be applicable for only the items for which the Bidder has submitted compliance. |
| Synopsis on Scope of Work | 48 | Acceptance Testing | The Acceptance Tests for the sites shall be carried out in accordance to the scope, requirement, specifications and design principles mentioned in this document. | Is the bidder expected to provide the CPE for acceptance testing ? If yes then are these CPEs to be part of the installation or is bidder free to take them back once AT is completed? | TEST Lab equipment will be used for this purpose. |
| Synopsis on Scope of Work | 49 | Acceptance Testing | The above said Acceptance Test shall be conducted for each location by a Committee comprising of officers from RailTel. | Is the AT expected after each end customer deployment. If the end customer deployment has 500 sites/locations is the AT expected to be done for each location as mentioned in the clause ? | This will be applicable based on customer requirement (case to case basis) |
| Annexure K | 70 | | OEM (Offered solution) should have proven Routing SDWAN solution which has deployment in Public Sector/Government/departments/ Enterprises. | Request to amend the clause as "OEM (Offered solution) should have proven Routing/SDWAN solution which has deployment in Public Sector/Government/departments/ Enterprises" | EOI Conditions are very clear. No change is proposed. |
| Annexure K | 70 | | OEM (Offered solution) should have proven Routing SDWAN solution which has deployment in Public Sector/Government/departments/ Enterprises with 100 CPE Sites in single customer. | Request to amend the clause as "OEM (Offered solution) should have proven Routing/SDWAN solution which has deployment in Public Sector/Government/departments/ Enterprises" | EOI Conditions are very clear. No change is proposed. |

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| Annexure-K | | | Request to reduce the weightage on “Proven technology Score” as we are a startup and our project is a part of “Make in India” initiative. Moreover SDWAN being a new technology very few “Make in India” projects can fulfil the requirements like “having multiple install bases of 100 CPE devices” & a “total of 1000 CPE devices already deployed”. Our solution is comparable with the best in the industry and added advantage is that the solution is customizable if needed. Railtel might come across such niche requirements and we have the capability in addressing them. (Annexure – K) | | EOI Conditions are very clear. No change is proposed. |
| | 27 | | Comments mismatch : Comments for “Redundancy,, “ Hardware Platforms for routing”, “Software Platform” doesn’t refer to the explanation. Is there any revision in the comments? (Pg:27, Par:4-6) | | EOI Conditions are very clear. No change is proposed. |
| | | | Is Security Deposit returnable and what are the timelines to return the amount | | Already clarify in tender document clause 14.4-e |
| | | | Any leniency on the previous project details from the bidder asking for work order/ completion certificate? (Pg:26, Par:7) : We have delivered multiple IT Projects in the past, SDWAN Product was launched recently. Will the Workorders of such IT Projects delivered comply with the requirement | | EOI Conditions are very clear. No change is proposed. |
| | | | During the Webex session it was mentioned that the clause “OEM / Bidder needs to have a support center in country outside India”, It was discussed to be waived off. Will it be? (Pg:26, Par:9) | | Please see corrigendum-III |
| | | | 6) Hardware scalability is possible within device’s capacity limit as we have multiple models with varying capacity limits. Hence our solution is scalable but not a single fit solution as mentioned in the document Is this fine ? (Pg:26 Par:4) | | Please see corrigendum-III |
| | | | 7) Document is asking to provide security without any third party security software. SDWAN solution has its inbuilt security like zone based firewall, Layer 7 visibility etc, but security features like Threat prevention, Antivirus, Antispyware, Malware protection etc could be provided only by specialised security vendors. Hence we can provide a secured SDWAN solution on the same hardware deployed through our partnership with leading Global security vendor in the market. We would like to explain our Solution in detail during Technical Presentation | | Security means :- SDWAN solution should have inbuilt security features like firewall, Layer 7 visibility. |
| | | | 8) Do we need optical ethernet interface for all models as most of the entry model may not have a SFP interface? (Pg:29, Para:27(i)) | | OEM should have option for optical ethernet interface in same/different hardware. |
| | | | 9) Document has asked for generation of reports and having the feature of data archiving but hasn’t mentioned about the number of days or the amount of data to be logged. Any comments? (Pg:44, Para: i) | | 1 Year |
| | | | 10) Who owns and manage the SMS gateway for alerts? Will Railtel provide the ticketing system for the customers? Do we have to integrate our system with the provided ticketing system? (Pg:44, Para:ii). to be discussed. | | EOI Conditions are very clear. No change is proposed. |
| | | | 11) Is the maintenance and support of devices for period of 5 yrs OR 3 yrs? (Pg:45, Para: iii) | | Please see corrigendum-III |
| | | | 12) Does the successful bidder need to maintain manpower resource at Railtel DC/DR locations for monitoring and management of the SDWAN solution? (Pg:45, Para: v) | | Please see corrigendum-III |
| | | | 13) “For Direct Deal with Railtel”, is it possible for the SDWAN vendor to approach the said customer directly to highlight the solution specifics? (Pg:51, Para:3.1.3) | | EOI Conditions are very clear. No change is proposed. |
| | | | 14) It is mentioned that the installation and commissioning of the solution is in the scope of work of bidder (Pg:47, Para: ii), but in the document it is also mentioned that Railtel will handle the installation and commissioning(Pg:44, Para: iv). Kindly help us with the clarity on the scope definition | | Please see corrigendum-III |

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| | | | 15) Is the tender submission online or on-site. If online, then how the DDs for Empanelment & SD can be submitted? Specifically Due to Covid 19 Extended Lockdown we need to align ourselves for EOI Submission Plan | | Please see corrigendum-III |
| | | | 16) OEM should have multiple support centers to support RailTel business across India to be able SLA being offered by RailTel to its customers (Page No 27, Point No 3) Can we get the specifics of number of Support center required. We understand OEM Should be able to provide Hardware/ RMA Support at various locations across the country, Kindly confirm if our understanding of clause is correct | | OEM Should be able to provide Hardware/ RMA Support at various locations across the country. |
| | | | 17) RailTel is a major ISP that provides connectivity services to it customers using its core fiber & IP based network. Equipment provided / already provisioned should be able to support L2, L3, IP MPLS, P2P, Internet & BB services. OEM should have proven and displayed". Kindly Explain (Pg:26 Par:1) | | OEM should have proven system to provide L2 & L3 services using SD WAN and it should be compatible with RailTel service offering |
| Clause No 14.5/ PAYMENT TERMS/Page No 20 of 74 | | <p>a) Normally, RailTel shall not make any financial investments in the services acquired through PARTNER except for infrastructure at the Data Centre or the network infrastructure already available with RailTel. The Go-to Market Strategy and pricing of services will be done jointly with the PARTNER once the price is discovered.</p> <p>b) The Payments due to the PARTNER's will be on back to back basis:</p> <p>i. Payment will be made only after receipt of amount from the Customer.</p> <p>ii. Payment will be made to the Partner within two weeks from the receipt of Invoice of the Partner.</p> <p>ii. All other arrangements between RailTel and PARTNER will be on back to back basis and should be mutually agreed before delivery of the services to the customer.</p> | <p>Request railtel team to change the clause as :</p> <p>Payment shall be made in Indian Currency (Rs) 80 % payment of the value of the supply items would be made on receipt of material by the consignee(at site / the stores) duly inspected and on submission of the following documents subject to any deductions or recovery which RailTel may be entitled to make under the contract:</p> <ol style="list-style-type: none"> 1) Invoice (GST) 2) Delivery Challan/e-way bill. 3) Packing list. 4)Factory Test Report/Certified manufacturer Test Report 5) Purchaser's Inspection certificate 6) Consignee receipt 7) Insurance certificate 8) Certificates duly signed by the firm certifying that equipment/ materials being delivered are new and conform to technical specification. <p>Balance 20 % shall be made after complete installation of the equipments at site.</p> | <p>We understand that it Railtel is giving service to end customer but we request railtel to understand that for a bidder will have to make complete 100 % payment of Hardware and Services to OEM at the time of order loading. So as an MSME bidder we request railtel to incorporate our suggestion .</p> | EOI Conditions are very clear. No change is proposed. |
| Annexure A / ELIGIBILITY CONDITIONS FOR BIDDERS/ Clause No 2/point b/i/ point 7/Page No 26 of 74 | | The OEM / Bidder has provided Services Individually to enterprise/ retail customers Telco /ISP for a period of at least last 6 months. | <p>We would request to amend the clause as :</p> <p>The OEM / Bidder has Supply Routers/Switches and Similar IT Networking Solutions Individually to enterprise/ retail customers Telco /ISP/Government with satisfactory working as to Government/PSUs/Telecom Service Providers/Public Listed Company during the last preceding 3 financial years (i.e. current year plus three previous financial years)</p> | Please include IT Networking solution Order also in the category of Similar work, as your current SOR as SDWAN is also a part of IT Networking Solution | EOI Conditions are very clear. No change is proposed. |
| Annexure B/ A/ Technical Evaluation Criteria/ Bidder Profile / I/A/Page No 32 of 74 | | Executed related to SD WAN Work | <p>We would request to amend the clause as :</p> <p>Executed Related to Routers/Switches and Similar IT Networking Solutions work</p> | Please include IT Networking solution Order also in the category of Similar work, as your current SOR as SDWAN is also a part of IT Networking Solution | EOI Conditions are very clear. No change is proposed. |
| Page 42, Point vii e | | Proposed cloud managed solution CPE should not take more than 10kbps per device and have AES256 encrypted tunnel to cloud management from each device. | Different OEM have different cloud solution, we would request to change the clause as below: "Proposed cloud managed solution CPE should send minimum control traffic to the cloud and have AES256 encrypted tunnel to cloud management from each device." | | Please see the corrigendum-III |
| Page 42 pnt vii f | | Proposed cloud managed solution should be fully HIPAA / PCI compliant. | Please remove this clause as RailTel will be hosting the controller in its DC and not on Cloud. | | Please see the corrigendum-III |

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| Page 44, Point 4.j | | E-Mail, SMS and if required Ticketing system to be integrated with SDWAN. | Kindly change the clause "E-Mail or SMS and if required Ticketing system to be integrated with SDWAN". | | Please see the corrigendum-III |
| Page 46 Point Xxi | | Shortlisted Bidder should provide Controllers and centralized system at RailTel/bidder's DC and DR for 1000 CPEs and should be scalable to 10000 CPEs in day -1 as per High-Level Architecture & Set-up of SDWAN described above and it should be free of cost to RailTel. | VMs will be provided by RailTel to host the controller. Please change this clause as per below: Shortlisted Bidder should provide SDWAN Controller Software. RailTel will provide the necessary hosting environment such as VMs for the same. | | EOI Conditions are very clear. No change is proposed. |
| Page 47 , Point c. 6 | | OEM will ensure that proposed centralized platform will not face any hassles such as End of Life or End of Sale for next 8 years | We understand that OEM would be providing networking router and Software at Central Site. Kindly clarify and modify following changes: "OEM will ensure that proposed centralized software platform will not face any hassles such as End of Life or End of Sale for next 8 years." | | EOI Conditions are very clear. No change is proposed. |
| Page 42 Point no. vii a) | | Proposed cloud managed solution should have all Security of operation center certifications SAS70 type II / SSAE16 and ISO 27001 related to DC. | Kindly Delete this clause as it is not applicable to bidders as the controllers are going to be hosted in RailTel DC. | | Please see the corrigendum-III |
| Page 42 Point no. vii g) | | Proposed cloud managed solution should have the SDWAN controller in RailTel DC. | Kindly clarify that for any solution "controller will be in RailTel DC" | | Please see the corrigendum-III |
| Page 33, Point IV, 7) | | 7) Solution should support any kind of transport such MPLS, and Wireless WAN (4G / LTE), Ethernet. | Kindly add E1 and V.35 serial uplink support as per solution 7) Solution should support any kind of transport such MPLS, and Wireless WAN (4G / LTE), Ethernet, E1 and Serial V.35 | | EOI Conditions are very clear. No change is proposed. |
| Page 42, Point vii e | Update | Proposed cloud managed solution CPE should not take more than 10kbps per device and have AES256 encrypted tunnel to cloud management from each device. | Different OEM have different cloud solution, we would request to change the clause as below: "Proposed cloud managed solution CPE should send minimum control traffic to the cloud and have AES256 encrypted tunnel to cloud management from each device." | | Please see the corrigendum-III |
| Page 42 pnt vii f | Update | Proposed cloud managed solution should be fully HIPAA / PCI compliant. | Please remove this clause as RailTel will be hosting the controller in its DC and not on Cloud. | | Please see the corrigendum-III |
| Page 44, Point 4.j | Update | E-Mail, SMS and if required Ticketing system to be integrated with SDWAN. | Kindly change the clause "E-Mail or SMS and if required Ticketing system to be integrated with SDWAN". | | Please see the corrigendum-III |
| Page 46 Point Xxi | Update | Shortlisted Bidder should provide Controllers and centralized system at RailTel/bidder's DC and DR for 1000 CPEs and should be scalable to 10000 CPEs in day -1 as per High-Level Architecture & Set-up of SDWAN described above and it should be free of cost to RailTel. | VMs will be provided by RailTel to host the controller. Please change this clause as per below: Shortlisted Bidder should provide SDWAN Controller Software. RailTel will provide the necessary hosting environment such as VMs for the same. | | EOI Conditions are very clear. No change is proposed. |
| Page 47 , Point c. 6 | Update | OEM will ensure that proposed centralized platform will not face any hassles such as End of Life or End of Sale for next 8 years | We understand that OEM would be providing networking router and Software at Central Site. Kindly clarify and modify following changes: "OEM will ensure that proposed centralized software platform will not face any hassles such as End of Life or End of Sale for next 8 years." | | EOI Conditions are very clear. No change is proposed. |
| Page 42 Point no. vii a) | Update | Proposed cloud managed solution should have all Security of operation center certifications SAS70 type II / SSAE16 and ISO 27001 related to DC. | Kindly Delete this clause as it is not applicable to bidders as the controllers are going to be hosted in RailTel DC. | | Please see the corrigendum-III |
| Page 42 Point no. vii g) | Update | Proposed cloud managed solution should have the SDWAN controller in RailTel DC. | Kindly clarify that for any solution "controller will be in RailTel DC" | | Please see the corrigendum-III |
| 06: Submission of EOI: 6 (i) a | 15 | EOI should be typed and submitted on A4 size paper, spirally and securely bound and with all pages therein in serial order. (All Chapters/ Annexures etc. should be done in proper sequencing and should follow ascending order of sequencing. | Under current scenario of National lockdown, we suggest for ONLINE submission of EOI response with limited necessarily documents. | | Please See Corrigendum-III |
| EOI response Submission date 7 | 16 | The last date for submission of response to EOI is 05.06.2020 up to 1500 Hrs | Under current scenario of National lockdown, we suggest for the EOI response submission timelines to be extended by 03 weeks post National lockdown. | | Please See Corrigendum-III |

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| 5: Synopsis on Scope of Work: xxi | 46 | Shortlisted Bidder should provide Controllers and centralized system at RailTel/bidder's DC and DR for 1000 CPEs and should be scalable to 10000 CPEs in day -1 as per High-Level Architecture & Set-up of SDWAN described above and it should be free of cost to RailTel. | We have an existing deployment of our SD-WAN Head End which hosts the Controllers and Centralised management system at our DC and DR site with a capacity to support more than 1000 CPEs and horizontal scalability of >10000 CPEs. Our system support multi level tenancy and we can support RailTel as a completely separate entity onto our existing platform. Please clarify does our existing platform in our Data centre suffice Railtel requirement for the said clause. | | EOI Conditions are very clear. No change is proposed. |
| Mandatory Criteria: 2b (i) | 25 | Bidder Experience: 2: The Bidder should be an OEM or authorized representative of OEM. OEM can authorize maximum two bidder for participation in EOI. | Pl clarify how two bidders will be empanelled with single OEM as OEM will deploy single instance solution for Railtel. | | Shortlisted Bidder should provide Controllers and centralized system at RailTel/bidder's DC and DR for 1000 CPEs and should be scalable to 10000 CPEs in day -1 as per High-Level Architecture & Set-up of SDWAN described above and it should be free of cost to RailTel. |
| | | <p>iii. If the PARTNER, in either of the above circumstances, does not remedy his failure within a period of 30 days (or such longer period as the RailTel may authorize in writing) after receipt of the default notice from the RailTel.</p> <p>b) Gestation period of 12 months shall be given to the PARTNER after the date of issue of Empanelment Letter and signing the agreement for business generation and within this period at least business of work orders of total Rs 1 crore has to be acquired by the efforts of PARTNER.</p> <p>i. If the selected PARTNER fails to generate within this period, the PARTNER shall be given another grace period of additional 3 months to acquire service(s) of Rs 1 crore value. If the PARTNER fails to deliver even in the extended grace period then the empanelment shall stand terminated without any further notice. Security Deposit of empaneled partners who fail to achieve the target will not be refunded.</p> <p>In addition to the requirement of generation of business by the efforts of PARTNER in the gestation period, a PARTNER has to ensure business engagement with RailTel and if the PARTNER has no service engagement for a period of six months (after successful completion of gestation period) during tenure of the empanelment, RailTel may delist the PARTNER from the empanelment list.</p> | I just have concern with the mentioned clause for non refund of security .As this will force vendors not to participate .Business up to 1 Cr in an year seems non doable . There has to be some support from Railtel as well . Partnership is mutual relationship | | EOI Conditions are very clear. No change is proposed. |

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| | <p>Clause 14.8 (B) Gestation period of 12 months shall be given to the PARTNER after the date of issue of Empanelment Letter and signing the agreement for business generation and within this period at least business of work orders of total Rs 1 crore has to be acquired by the efforts of PARTNER.</p> <p>i) If the selected PARTNER fails to generate within this period, the PARTNER shall be given another grace period of additional 3 months to acquire service(s) of Rs 1 crore value. If the PARTNER fails to deliver even in the extended grace period then the empanelment shall stand terminated without any further notice. Security Deposit of empaneled partners who fail to achieve the target will not be refunded. In addition to the requirement of generation of business by the efforts of PARTNER in the gestation period, a PARTNER has to ensure business engagement with RailTel and if the PARTNER has no service engagement for a period of six months (after successful completion of gestation period) during tenure of the empanelment, RailTel may delist the PARTNER from the empanelment list, without any further notice as soon as twelve months non-engagement period completes.</p> <p>ii) Post the acquisition, PARTNER should successfully execute the work and payments shall be realized within the stipulated time frame as mentioned in the contract with the client and Non-compliance shall lead to termination of the empanelment.</p> | <p>This is in reference to our discussions yesterday, We M/s Supreme Solutions Private Limited is having our presence across the private and government sector from the last 10 years for the ICT projects. We intend to participate in the subject EOI and partner Railtel in the scope specified. However, after reviewing the EOI we noticed the following clause:</p> | | EOI Conditions are very clear. No change is proposed. |
| | TCP Flow Optimization | <p>For FEC, TCP Flow Optimization and Packet Duplication. "We have specific algorithms to ensure better QoE for Voice and Video applications by using link quality/Capacity per tunnel, throughput metrics, packet by packet load balancing, flow spraying, duplication etc. Hence request you to modify the clause as " the solution should guarantee the delivery for Voice and Video application with better user experience by using either standard algorithms like Forward error correction, packet duplication or vendor specific algorithms for real time applications like Voice and Video application experience optimization."</p> | | Since this is not mandatory requirement . No change is proposed. |
| | Packet Duplication | | | Since this is not mandatory requirement . No change is proposed. |
| | Forward Error Corrections | | | Since this is not mandatory requirement . No change is proposed. |
| | The router shall support end-to-end QoS at each level with marking, policing and shaping, DSCP remarking | Request you to rephrase the clause as "The router shall support end-to-end QoS at each level with marking/policing/ shaping/ DSCP remarking." | | Since this is not mandatory requirement . No change is proposed. |
| | System should able to support L3VPN, L2VPN and VPLS | Request you rephrase the clause as System should able to support L3VPN or L2VPN or VPLS | | Since this is not mandatory requirement . No change is proposed. |
| | Cumulative Annual Turnover of the Company (Last three year and current year) Audited Balance Sheet. | Request you dilute the clause as we are part of MSME and Start up India | | EOI Conditions are very clear. No change is proposed. |
| Cost of the Empanelment Processing Fee | As per EOI Cost of the Empanelment Processing fee is INR 30,000 in the form of DD .We would like to inform you , we fall under the MSME category therefore we need clarification that still do we need to submit DD of INR 30,000 or not or is it exempted. Request you to please clarify on the same | | | EOI Conditions are very clear. No change is proposed. |

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| Security Deposit | | As per EOI , Cost of the Security Deposit is INR 2,00,000/- online payment but we fall under the MSME category therefore we need clarification that still do we need to pay SD of INR 2,00,000/- or is it excepted. Request you to please clarify on the same | | | EOI Conditions are very clear. No change is proposed. |
| OEM Experience | 26 | RailTel is a major ISP that provides connectivity services to it customers using its core fiber & IP based network. Equipment provided / already provisioned should be able to support L2, L3, IP MPLS, P2P, Internet & BB services. OEM should have proven and displayed. | The OEM here refer to the OEM of SD-WAN CPE and controller provided? Or it also includes OEM's of SD-WAN Automation solution providing abstraction layer and common service model that accommodates any mix of SD-WAN platforms, vendors, and underlay network domains | | OEM should have proven system to provide L2 & L3 services using SD WAN and it should be compatible with RailTel service offering |
| OEM Experience | 28 | RailTel will extend SDWAN services to end customers from its Network Thus, SDWAN set-up provided by OEM should support multitenant operations | Multitenant operations is required at SDWAN Controller level or automation layer/management layer above multi-evndor SDWAN controllers. | | EOI Conditions are very clear. No change is proposed. |
| Technical compliances of offered solution | 28 | 10) Provide applications with better perceived Quality of Experience 11) Single touchpoint to define, monitor and maintain SD-WAN network 13) Detailed information around network infrastructure, health, status, and reporting 18)Automation and Ease of Operations, Self-Driven network 23) Automation and ease of management from a single pane of glass | All the listed features are required from SDWAN Network provider (via SD-WAN controller) or a separate multi vendor automation/abstraction layer is required to manage multi vendor SDWAN network/services E2E. An Independent Automation/abstraction management layer provides following automations: 1) automates SD-WAN overlay network configuration as well as service provisioning across the underlay network, which eliminates a host of swivel chair operations and error-prone manual tasks and reduces the service activation interval from hours to mere minutes. 2) unifies service assurance and analytics across the overlay and underlay network, which speeds fault isolation and remediation, and enables true, closed-loop automation for the entire network services lifecycle. | | EOI Conditions are very clear. No change is proposed. |
| Technical compliances of offered solution | 29 | SD WAN CPEs should support following interfaces i. Ethernet and Optical Ethernet ii. LTE,4G ,3G and 2G. iii. LAN Interfaces. | SDWAN CPE's and controllers will be from single vendor or multiple vendors. Also CPE will be uCPE delivered as VNF by network vendors along with other VNF's which needs to be deployed on a bare metal machine and stitched for service chaining (by an external NFVO). | | EOI Conditions are very clear. No change is proposed. |
| Proposed Technical Compliance: 70 Marks | 33 | System should able to support centralized authentication system to authenticate network elements of control plane, data plane and NMS management tool. | NMS Management tool is required from SDWAN network vendor (if it's a single vendor solution) or UNMS vendor providing multi vendor NMS management tool. | | EOI Conditions are very clear. No change is proposed. |
| Proposed Technical Compliance: 70 Marks | 34 | Management | Management tool is required from SDWAN network vendor (if it's a single vendor solution) or UNMS vendor providing multi vendor NMS management tool. | | EOI Conditions are very clear. No change is proposed. |

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| <p>General - SDWAN Centralized Automation solution to address Provisioning complexity (Multi- vendor environment only)</p> | <p>For SD-WAN service delivery entails several disjointed and resource-intensive processes. In the typical model, once the customer service representative captures the high-level service parameters in the Order Management System (OMS), multiple fulfillment processes are kicked off:</p> <ul style="list-style-type: none"> • Design the SD-WAN overlay service • Deliver, install, turn up the universal CPE (uCPE) device • Configure the underlay service(s) (such as MPLS or broadband Internet) • Download and instantiate the SD-WAN edge node VNF onto each uCPE • Download and instantiate value-added VNFs (such as firewall) onto each uCPE • Service-chain the value-added VNFs between the customer LAN and the SD-WAN within the uCPE and between the SD-WAN and the Internet within or behind the SDWAN gateway node • Configure the value-added VNFs (such as firewall policies) • Add the new customer SD-WAN VPN instance into the SD-WAN controller - Create the new customer - Associate the new SD-WAN edge nodes (such as by MAC ID) - Identify allowed shared SD-WAN gateway nodes • Configure the SD-WAN service parameters into the SD-WAN controller | <p>Is there a requirement for a centralized multi vendor automation solution which can orchestrate and automate the manual cross-department order-to-service steps identified in column F. First, the MSP's customer service representative uses their Portals to select SD-WAN service parameters (customer/tenant, sites, uCPE, traffic steering/bandwidth/QoS policies), optional value-added VNFs and their parameters, and the underlay carrier WAN/Internet service profile. This triggers order orchestration to other BSS and OSS systems to initiate all aspects of service turn up (such as setting up billing, shipping uCPE devices to each location, initiating service design, and network provisioning). For these latter tasks, the OMS transmits the SD-WAN, value-added VNF, and underlay (MPLS) connectivity service order to centralized multi vendor/multi domian orchestratorwhich then automates the following steps:</p> <ol style="list-style-type: none"> 1. Interrogate multiple data repositories (including internally managed resources) for data to enrich the service order (for example, IP and VLAN addresses, uCPE MAC) 2. Select and pre-configure the appropriate SD-WAN controller instances to create a new tenant with selected endpoints, service parameters, and traffic policies 3. Configure tenant VPN instance on shared SD-WAN gateway nodes 4. Discover the uCPE devices and automate their configuration with Zero-Touch Provisioning 5. Orchestrate the WAN controller(s) to provision or update the underlay connectivity service(s) 6. Download, install, and activate the SD-WAN VNF onto the uCPE 7. Initiate download of SD-WAN Day 1 config file from SD-WAN controller 8. Download, install, and activate value-added VNFs (firewall) onto the uCPE, then service chain all VNFs. 9. Perform Day 1 configuration of value-added VNFs 10. Orchestrate service orchestration | | <p>EOI Conditions are very clear. No change is proposed.</p> |
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