

Appointment of Project Implementation Agency (PIA) for BharatNet Phase-II works to establish IP-MPLS network infrastructure in the state of Andhra Pradesh

Clarifications, Dt:30.10.2018

SNo	Section	Clause	Brief Description of the clause	Ref Page No in Tender	Query/ Comments of Bidder	Clarification by APSFL
1	11.1.2 - Block/ IP MPLS Node	15	a. Routing Protocols: Static, RIP, OSPF, ISIS and BGP. VRRP should also be supported b. MPLS: MPLS LDP, IP FRR, BGP Labelled Unicast, BGP PIC (Edge and Core), VPNs: 6PE/6VPE, L3 VPN, EoMPLS, VPLS / EVPN/H-VPLS. Min. 100 MPLS VPN instances, 2048EoMPLS tunnels/VPLS instances should be supported d. Multicast: uRPF, PIM-SM, PIM-SSM, M-VPN, Segment Routing & Segment Routing TE.	87	a. Routing Protocols: Static, RIP, OSPF, ISIS and BGP. VRRP should also be supported b. MPLS: MPLS LDP, IP FRR, BGP Labelled Unicast, BGP PIC (Edge and Core), VPNs: 6PE/6VPE, L3 VPN, EoMPLS, VPLS , EVPN,H-VPLS. Min. 100 MPLS VPN instances, 2048EoMPLS tunnels, VPLS instances should be supported d. Multicast: uRPF, PIM-SM, PIM-SSM, M-VPN, Segment Routing & Segment Routing TE.	No change
2	11.1.7.1 Gram Panchayat Network Racks Local & Remote Monitoring	4.9	All monitoring data shall transmit through both provisions of GSM Mode and Ethernet to NOC	94	Who will bear the GSM SIM charges monthly? So many places 2G is not available, but 4G Network is available. Requesting you to accept 4G Network also.	System Integrator
3	11.1.7.2 Master Block Network Racks & Block Network Racks Local & Remote Monitoring	4.1	All monitoring data shall transmit through both provisions of GSM Mode and Ethernet to NOC	97	Who will bear the GSM SIM charges Monthly? So many places 2G is not available, but 4G Network is available. Requesting you to accept 4G Network also.	SI shall bear the monthly charges. 2G/3G/4G which ever is available
4	Corrigendum # 10	Specifications Data Centre Active Components - Annexure # C & Table 3: Storage	Cache- Minimum 128 GB of useable cache spread across 2 controllers of the storage system. It should be expandable upto 256 GB across these 2 controllers of the storage system and should be scalable accordingly to 8 Controllers. If cache is provided in additional hardware for unified storage solution, then cache must be over and above 128 GB	Page # 11 of Corrigendum # 10, Dt: 23.10.2018	The storage system should be modularly scalable from the current 2 controllers to a maximum of 4 controllers with minimum of 128GB cache and scalable to 256GB. The architecture should be based on tightly coupled clustered storage system with low latency internal interconnects between the controllers No loosely coupled clustered storage/ scale out storage architecture having external SAN or Ethernet switch for intra controller connectivity is to be offered.	The storage system should be modularly scalable from the current 2 controllers to a maximum of 4 controllers with minimum of 128GB cache and scalable to 256GB.
5	Corrigendum # 10	Specifications Data Centre Active Components - Annexure # C & Table 3: Storage	Controllers - At least 2 Controllers in active/active mode and scalable to 8 controllers	Page # 11 of Corrigendum # 10, Dt: 23.10.2018	Offered storage array shall be offered with 2 controllers in true symmetric active-active so that a single logical unit can be shared / accessed across all offered controllers in symmetrical fashion, while supporting all the major functionalities like Thin Provisioning, Data Tiering etc and scalable to 4 controllers.	Controllers - At least 2 Controllers in active/active mode and scalable to 4 controllers.

6	2.3	S.No 20/ Corrigendum 8	OEM through its Indian Subsidiary must have 24X7 hotline & toll-Free help desk for service support in India with a minimum of 100 seats & Experience/R&D center in Andhra Pradesh with their own technical support. OEM has to give an undertaking for the same	20	OEM has TAC(technical assistant centre) & GNOC's deployed already in India for troubleshooting critical problems for across the customers globally. Highly skilled resources are being deployed to resolve critical issues for multiple customer. Establishing another center and deploying so many critical resources in a particular location will require detailed study and due delegece by the OEM's global teams, which is a time consuming exercise. Such infra for a specific project will increase the cost of the project and make it unviable . We therefore request you to change the clause as follows: "OEM through its Indian Subsidiary must have 24X7 hotline & toll-Free help desk for service support in India with their own technical support centre. OEM has to give an undertaking for the same".	Please refer corrigendum
7	11.1.2 - Block/ IP MPLS Node	New	please add		The proposed router should support 25G , 40 G interfaces form day 1	No change
8	11.1.2 - Block/ IP MPLS Node	New	please add		The router should support IPoDWDM on minimum 2 x 100G ports	No change
9	11.1.2 - Block/ IP MPLS Node		Proposed router should be at least CE 2.0 Certified		Proposed router should be at least CE 2.0 Certified, In case of certification in progress, OEM should give an undertaking to submit the Certificate within 6 months from the award of the contract failing which 5% of the overall cost of the project will be kept on hold for the System Integrator.	Please refer corrigendum
10	11.1.1 Master Block/Mandal Hub Node		Proposed router should be at least CE 2.0 Certified		Proposed router should be at least CE 2.0 Certified, In case of certification in progress, OEM should give an undertaking to submit the Certificate within 6 months from the award of the contract failing which 5% of the overall cost of the project will be kept on hold for the System Integrator.	Please refer corrigendum
11	11.1.1 Master Block/Mandal Hub Node 11.1.2 Block/Mandal IP-MPLS Node,	S.No 5, 12/ Corrigendum 8	Proposed router should be at least CE 2.0 Certified.	86, 87	Requirement of telecom grade networks are fast changing in terms of features and throughput capacity, OEMs are introducing new products to meet the dynamic requirements. Getting CE2.0 certification for new products takes time. Hence, APSFL is requested to consider CE2.0 complied products at the time of bid submission and allow 4-6 months to produce the certificate. We therefore request APSFL to consider to change the clause to the following: Proposed Router should be CE2.0 Complied and should be certified before the delivery of the router.	Please refer corrigendum
12	11.1.1 Master Block/Mandal Hub Node 11.1.2 Block/Mandal IP-MPLS Node,	S.No 5, 12/ Corrigendum 8	Proposed router should be at least CE 2.0 Certified.		APSFL has any of the following options / remedy to exercise, should OEM's delay's CE certification by few more weeks after delivery. 1. Levy suitable penalty / LD for delays. 2. Ask vendor to provide alternate higher model (meeting the functional requirement) that is already CE certified and eventually replace with the offered model.	Please refer corrigendum
13	11.1.7.2 Master Block Network Racks & Block Network Racks	2.3.1. Master Block Network Rack	Rack shall be accomplished with usable 21 U size network equipment, should not exceed 24U standardrack height. UPS and Batteries shall be included in the same rack in another column. Air Condition should notcover to UPS & Batteries column in the rack	96	Size of the rack depends on the type of solution provided by SI / Bidder. Requesting to remove this option and leave the option to SI as per their equipment.	Bidder shall supply the racks (including UPS, A/C and Batteries in the same rack) as per the solution requirement and should ensure that the racks should have 30% RU space along with back up power & cooling reserved for the future expansion over and above the usable space.

14	11.1.7.2 Master Block Network Racks & Block Network Racks	2.3.2. Block Network Racks	Rack shall be accomplished with usable 6 U size network equipment, should not exceed 16U standard rack height. UPS and Batteries shall be included in the same rack in another column. Air Conditions should not cover to UPS & Batteries column in the rack.	96	Size of the rack depends on the type of solution provided by SI / Bidder. Requesting to remove this option and leave the option to SI as per their equipment.	Bidder shall supply the racks as per the solution requirement and should ensure that the racks should have 30% RU space along with back up power & cooling reserved for the future expansion over and above the usable space and infrastructure requirement.
15	11.1.1 Master Block/Mandal Hub Node		Rack Size		Suitable Rack depending on the solution proposed should be supplied by Bidder	Bidder shall supply the racks (including UPS, A/C and Batteries in the same rack) as per the solution requirement and should ensure that the racks should have 30% RU space along with back up power & cooling reserved for the future expansion over and above the usable space.
16	11.1.7.2 Master Block Network Rack	8.2	Split Air Conditioned Unit designed for cooling the rack with 24X7 operations in all respect	97	As per our understanding, these racks would be placed at 3rd party location, so, there may be some practical issues to install split AC. There will be different kinds of room conditions. Split Air Conditions are not suitable for this kind of racks.	No change
17	11.1.2 - Block/ IP MPLS Node		The power supply of proposed router should have protection against under-voltage and reverse polarity conditions.	86	The power supply of proposed router should have protection against under-voltage.	No change
18	11.1.3 - GP IP-MPLS Node	S.No 14 Corrigendum 8	The proposed router should support minimum of the following ports: 10 x 10 GE (SFP+) + 8 x 1G(SFP) + 4x (RJ-45). Router should be populated with 6 x 10 G 10 Kms, 4 x 1 G SFP 10 Kms and 4 x 10/100/1000 Copper Populated from DAY 1	89	The aggregate port count of 1G/10G optical interfaces increased from 14 ports to 18 ports. This will increase the overall cost of the project, as bigger and expensive routers need to be positioned. Also this limits only few OEMs to participate and compete. We request APSFL to consider the port count of 1G/10G optical interfaces to 14 (fourteen). We therefore request APSFL to consider to change the clause to the following: The proposed router should support minimum of the following ports: 10 x 10 GE (SFP+) + 4 x 1G(SFP) + 4x (RJ-45). Router should be populated with 6 x 10 G 10 Kms, 4 x 1 G SFP 10 Kms and 4 x 10/100/1000 Copper Populated from DAY 1	Please refer corrigendum
19	11.1.2 - Block/ IP MPLS Node	12	The proposed router should support the following: a. 256,000 MAC Addresses b. 250,000 IPv4 unicast routes c. 120,000 IPv6 routes d. 10,000 multicast routes e. 4 labels in label stack	87	The proposed router should support the following: a. 128,000 MAC Addresses b. 250,000 IPv4 unicast routes c. 64,000 IPv6 routes d. 16,000 multicast routes e. 4 labels in label stack	Please refer corrigendum
20	11.1.1 Master Block/Mandal Hub Node	S.No 2/ Corrigendum 8	The proposed router should support the following: a. 40,00,000 MAC Addresses b. 3,000,000 IPv4 unicast routes c. 15,00,000 IPv6 routes d. 50,000 multicast routes e. 5 labels in label stack	85	The 4 Million MAC address requirement asked in Tender is too high per practical requirement of MAC address on master block node. Master Block Router asked in tender is supposed to be used for BNG subscribers and packet forwarding as per design. Hence for 256K subscribers, only 256K MAC will be required. Keeping future requirement and also other Layer 2 VPNS this requirement of MAC address will never be more than 1 million. We therefore request to kindly change this clause to following: "The proposed router should support the following: a. 20,00,000 MAC Addresses b. 2,000,000 IPv4 unicast routes c. 1,000,000 IPv6 routes d. 50,000 multicast routes e. 5 labels in label stack"	Please refer corrigendum
21	11.1.3 - GP IP/MPLS Node		5 All ports in the proposed routers total forwarding performance should be 90 MPPS or more	9	9 All ports in the proposed routers total forwarding performance should be 280 MPPS or more	No change

22	E	PQ	Any member of the consortium should have an install base of at least 200 IP-MPLS technology based service provider edge routers/ aggregation routers/core routers along with establishment of POP locations with rack and UPS, which should be working satisfactorily for over one year in service provider environment and out of these, a minimum of 100 IP-MPLS technology based service provider edge routers/ aggregation routers/core routers should be deployed in India in a single network preferably in Government/ telco network	19	Any member of the consortium should have an install base of at least 200 IP-MPLS technology based service provider edge routers/ aggregation routers/core routers along with establishment of POP locations with rack and UPS, which should be working satisfactorily for over one year in Government Network/service provider environment and out of these, a minimum of 100 IP-MPLS technology based service provider edge routers/ aggregation routers/core routers should be deployed in India in a single network preferably in Government/ telco network	No change
23	11.1.3 - GP IP/MPLS Node		5 Proposed router should support switching capacity of at least 100 Gbps full duplex	9	Proposed router should support switching capacity of at least 200 Gbps full duplex	No change
24	11.1.3 - GP IP/MPLS Node	New	please add		The proposed router should support 1 Gb buffer from day1.	No change
25	11.1.3 - GP IP/MPLS Node	New	Please Add		The proposed router should support 25Gbps, 40 Gbp and 100 Gbps uplink ports which can be used as and when the requirement arises	No change
26	11.1.3 - GP IP/MPLS Node	New	Please Add		The proposed router should support on board bits port, PPS ports from day 1	No change
27	11.1.3 - GP IP/MPLS Node	New	Please add		The proposed router should have in built Global navigation satellite system from day 1 and should be able to track minimum 10 satellites.	No change
28	2	2.3.1. Qualification Criteria for System Integrators (General Eligibility)	4. Bidder should submit MAF (Manufacturer Authorization Form) with the product OEMs for electronics & electrical equipment. The Bidder / Consortium can quote products from only one OEM for each of the equipment categories. In case of Bidders offering multiple OEM options, such bids will be rejected. OEM shall ensure that all equipment / components / sub-components being supplied by them shall be supported for the entire contract period of 7 years. If the same is de-supported by the OEM for any reason whatsoever, the bidder shall replace it with an equivalent or better substitute that is acceptable to Purchaser without any additional cost to the Purchaser and without impacting the performance of the solution in any manner whatsoever.	19	We understand MAF is required at the time of bidding for all major equipments in the NOC such as UPS. For Network Operation Center (DC & DR) line item sr. no 9, as the NOC is to be proposed as comprehensive infrastructure solution, We request you to remove the the requirement of MAF for equipments such as IP phones, Access control, Fire Safety, Rodent Alarm and other BMS solutions required for the NOCs. Please confirm	Please refer corrigendum