WEBEL TECHNOLOGY LIMITED

NOTICE INVITING e-TENDER

Online Tender documents are invited for WBSWAN Technology Refresh from reputed System Integrators having sufficient experience and credentials for successful completion of "Similar Nature" of work in a Government Department/PSU/Autonomous Body or any reputed organization. Bidder must have adequate Service Engineer for providing on-site warranty service within the stipulated time.

1.	Tender No. & Date	WTL/PAR/STR/17-18/035 dated 15.01.2018
2.	Tender Version No.	1.0
3.	Brief description of material	WBSWAN Technology Refresh
4.	Tender Fee	Rs.10000.00 (Rupees Ten thousand only)
5.	Earnest Money Deposit	Rs.5000000.00 (Rupees fifty lakh only) in the form of Demand Draft from any Scheduled bank in favour of Webel Technology Limited payable at Kolkata
6.	Date of Downloading/Sale of Tender document	15.01.2018
7.	Pre-Bid Meeting date & time	19.01.2018 at 11.30 Hrs • Only two persons for each intending bidder's organization will be allowed to attend the Pre Bid Meeting. • The person should have proper authorization in respective company Letter Head. • Only queries as per format (Section - O) reaching WTL by 18.01.2018 at 16.00 Hrs will be taken for decision. • Queries will be sent to Manager (Purchase) (wtlpurchase@gmail.com) and copy to Ms. Soma Dey (soma@wb.gov.in) /Ms. Anita Dey (wtladey@gmail.com).
8.	Bid Submission Start date & time	30.01.2018 at 15.00 Hrs
9.	Last date & time of EMD & Tender Fee submission	07.02.2018 at 11.00 Hrs
10.	Last date & time of Bid Submission	05.02.2018 at 12.00 Hrs
11.	Date & time of Technical Bid Opening	07.02.2018 at 12.00 Hrs
12.	Venue of Pre-Bid Meeting & submission of EMD & Tender Fee	WEBEL TECHNOLOGY LIMITED (A Govt. of West Bengal Undertaking) Plot - 5, Block – BP, Sector – V, Salt Lake City, Kolkata – 700091.
13.	Contact person	Mr. Arunava Saha, Contact no. 23673403-06, Ext. 212 Ms. Anita Dey, Contact no. 23673403-06, Ext. 231 Ms. Soma De, Contact no. (033) 23392277

WEBEL TECHNOLOGY LIMITED

In the event of e-filling, intending bidder may download the tender documents from the website **https://wbtenders.gov.in** directly with the help of Digital Signature Certificate. Necessary cost of tender (tender fees) may be remitted through Demand Draft issued from any Scheduled Bank in favour of "Webel Technology Limited", payable at Kolkata and also to be documented through e-filling. Cost of Earnest Money Deposit (EMD) may be remitted through Demand Draft issued from any Scheduled Bank in favour of "Webel Technology Limited", payable at Kolkata and also to be documented through e-filling. The original Demand Draft against tender fee & Earnest Money Deposit (EMD) should be submitted physically to the Manager (Purchase)/Manager (Finance), Webel Technology Limited, Plot – 5, Block – BP, Sector-V, Salt Lake City, Kolkata-700 091 under sealed cover on or before 11.00 Hrs of 07.02.2018.

1. Both Techno Commercial Bid and Financial Bid are to be submitted concurrently duly digitally signed in the website https://wbtenders.gov.in

2. Tender documents may be downloaded from website and submission of Techno Commercial Bid and Financial Bid will be done as per Time Schedule stated in Section – C of this Tender Document.

3. The Financial Bid of the prospective Bidder will be considered only if the Techno Commercial Bid of the bidder is found qualified by the Tender Committee. The decision of the 'Tender Committee' will be final and absolute in this respect. The list of Qualified Bidders will be displayed in the website.

WEBEL TECHNOLOGY LIMITED

CONTENTS OF THE TENDER DOCUMENT

The Tender document comprises of the following:

SECTION – A   SCOPE OF WORK

SECTION – B   DATE AND TIME SHEDULE

SECTION – C   ELIGIBILITY CRITERIA

SECTION – D   INSTRUCTION TO BIDDER

SECTION – E   TECHNO COMMERCIAL EVALUATION & AWARDING OF CONTRACT

SECTION – F   BID FORM

SECTION – G   GUIDANCE FOR E-TENDERING

SECTION – H   BILL OF MATERIAL

SECTION – I   TECHNICAL SPECIFICATION WITH COMPLIANCE STATEMENT

SECTION – J   DETAILS OF ORDERS EXECUTED BY BIDDER

SECTION – K   FINANCIAL CAPABILITY OF BIDDER

SECTION – L   BIDDER'S DETAILS

SECTION – M   PRE-BID MEETING QUERY

SECTION – N   SUPPORT SERVICE CENTER & MANPOWER DETAILS OF BIDDER

SECTION – O   LIST OF CLIENTS OF SIMILAR ORDERS

SECTION – P   MANUFACTURER'S AUTHORIZATION FORM

SECTION – Q   PROFORMA FOR PERFORMANCE BANK GUARANTEE

SECTION - R   NIT DECLARATION

SECTION - S   LIST OF LOCATIONS

WEBEL TECHNOLOGY LIMITED

SECTION – A

SCOPE OF WORK

Job title: WBSWAN Technology Refresh

Background:

WBSWAN (West Bengal State Wide Area Network) is operational since 2001 connecting all District Head Quarters with State Head Quarter at Writers' Buildings with the funding from Government of West Bengal. Departments like Finance (Dist. Treasuries), Commercial Taxes, Police started using WBSWAN backbone since 2002 for accessing applications at their respective central servers at Kolkata, apart from regular video conferencing among the State (Writers' Buildings) and district head quarters. It is a triple play backbone network and information highway of the State Government for carrying out e-Governance activities through seamless data, voice and video communications among the Government Departments / Institutions / Head Quarters / Offices.

As a part of National e-Governance Action Plan later in 2005, WBSWAN has been extended up to the block level. Administrative Approval obtained from DeitY, GoI for Connectivity upto all Blocks of West Bengal over Terrestrial Leased Circuits from BSNL with minimum 2 Mbps Bandwidth for any link. The project was implemented in PPP model with sanctioned fund outlay of Rs 66.93 crores including operation and maintenance for 5 years. The Network was built by creating 426 POPs (Points of Presence) with BSNL Leased circuits linking 341 Block Head Quarters (BHQs), 65 Sub-division Head Quarters, 18 District Head Quarters, Writers' Building and 1 State Head Quarter (located at Monibhandar 3rd Floor, Webel Bhavan, Block- EP&GP, Sector-V, Salt Lake, Kolkata – 700091). The implementation was completed in December 2009 and it is operational since then. Later 4 more district head quarters have been added and number of WBSWAN POPs at present is 430 after addition of 4 new districts. Currently M/s Webel Mediatronics Limited is acting as the Network Operator for WBSWAN.
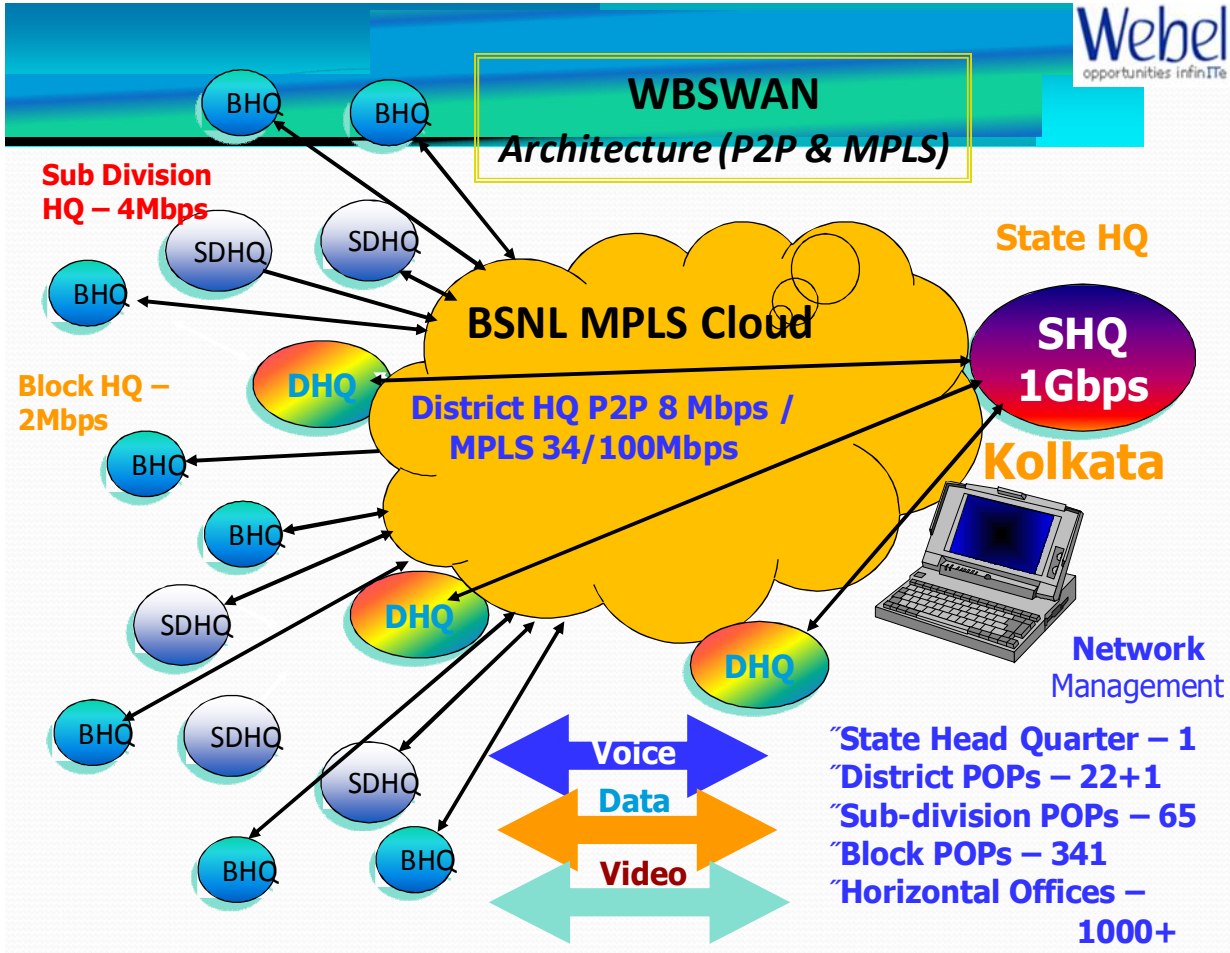
WBSWAN is operational for last 8 years with the electronic equipments procured and installed during the year 2008-09. Most of the equipments in WBSWAN installed at 426 POP locations (1 SHQ, 18 DHQs, 65 SDHQs, 341 BHQs and Writers Building) for connectivity purpose have become obsolete. OEMs have declared End of Support / End of Life for these equipments and are not supporting any maintenance of the same. These critical equipments / building blocks of WBSWAN are malfunctioning sometimes and rectification of the same becoming difficult and time consuming in the absence of OEM support. Moreover, these devices are unable to handle increased network traffic efficiently and securely and WBSWAN as a whole has become very vulnerable due to lack of OEM support. Hence these equipments are to be replaced at the earliest.

In recent times, the utilization of WBSWAN infrastructure has increased substantially as many Government Departments have started launching and accessing heavy e-Governance applications along with internet access over WBSWAN. Currently 1500+ Government offices are connected to and regular users of WBSWAN (10000+ concurrent users). New DHQ POP has been created in Alipurduar during 2015-16. During 2016-17, 3 more new districts have been created (Paschim Bardhaman, Jhargram and Kalimpong) and accordingly 3 DHQ POPs have been implemented. In view of the present day requirement of WBSWAN and considering future needs for next 5 years, the proposal for technology refresh and upgrade of WBSWAN infrastructure has been prepared.

Over the years WBSWAN has grown manifolds in size. Many important e-Governance applications e.g. e-District, e-Nathikaran, e-Bhuchitra, e-Vahan, e-Office, etc have been launched over WBSWAN during last 2-3 years and bandwidth utilization of WBSWAN from District to State Head Quarter has grown about 10 times and it has similarly grown from Block to Sub-division and from Sub-division to District Head Quarters. Number of horizontal office connectivity with WBSWAN has grown from 200 to 1500 during last 3 years. Recently about 800 P2P leased circuits have been migrated to MPLS MNS category using MPLS cloud of multiple service providers. During November-December 2017, 30 new Horizontal Circuits with
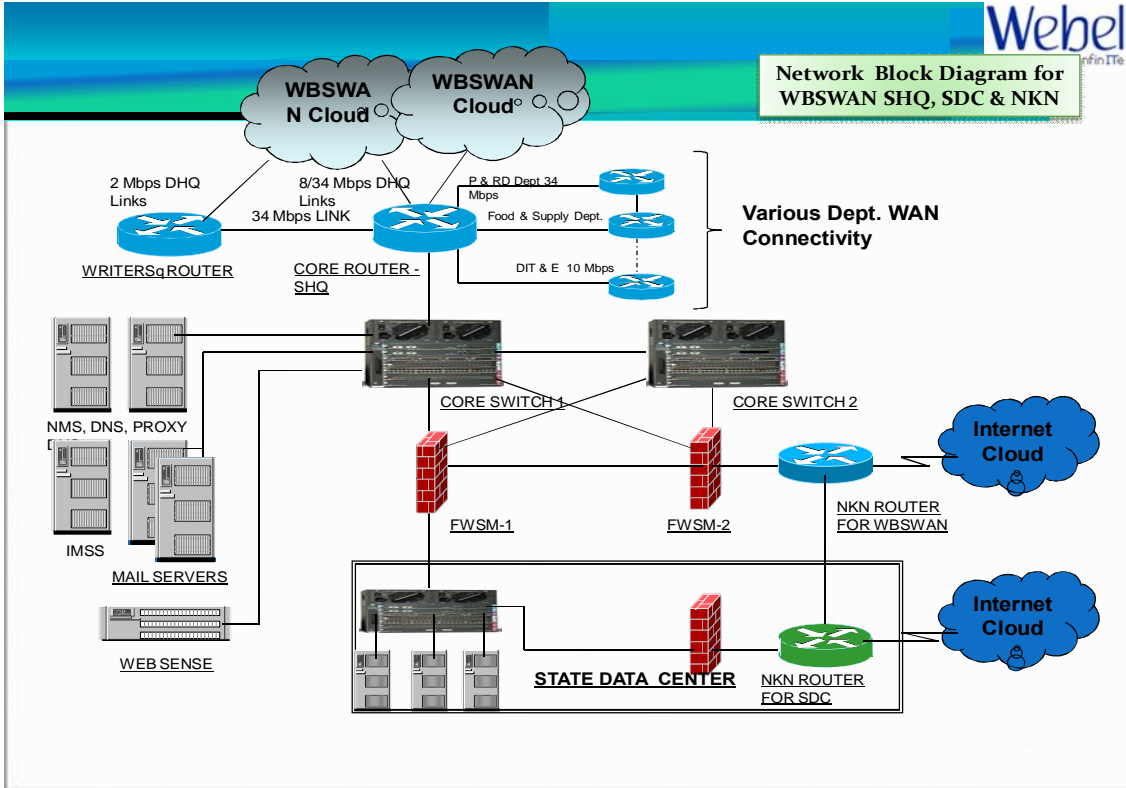
WEBEL TECHNOLOGY LIMITED

10/34/45/100 Mbps bandwidths have been installed to provide e-Office access to 65 Government Departments over WBSWAN. Number of concurrent WBSWAN users has grown significantly - from around 1,000 in 2014 to 10,000 in 2017. WBSWAN architecture has also changed from simple hierarchical 3 tier architecture to combination of 3 tier architecture and multiple MPLS clouds integrated at SHQ level. Instead of EIGRP routing protocol only, it has been integrated with other routing protocols i.e. OSPF, BGP, etc for smooth integration and interoperability with departmental WANs. A pictorial depiction with few block diagrams of WBSWAN Infrastructure at various tiers is presented below for reference and understanding.

WBSWAN ARCHITECTURE (3 tier, P2P Circuits)

STATE HQ . 1 NO.
DISTRICT HQ . 23 NOS.
SUB DIVISION HQ . 65 NOS.
BLOCK HQ . 341 NOS.
HORIZONTAL OFFICE . 1000 NOS.

WBSWAN
Architecture (P2P & MPLS)

Sub Division HQ – 4Mbps

BHQ   BHQ

SDHQ   SDHQ

BHQ

Block HQ – 2Mbps

DHQ

BSNL MPLS Cloud

District HQ P2P 8 Mbps / MPLS 34/100Mbps

State HQ

SHQ 1Gbps

Kolkata

BHQ

BHQ

BHQ

SDHQ

DHQ

DHQ

Network Management

BHQ   SDHQ

SDHQ

BHQ   BHQ

Voice
Data
Video

˝State Head Quarter – 1
˝District POPs – 22+1
˝Sub-division POPs – 65
˝Block POPs – 341
˝Horizontal Offices –
            1000+

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Network Block Diagram for WBSWAN SHQ, SDC & NKN

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Detailed Scope of Work:

Following are the major points in the proposed Technology Refresh for WBSWAN:

1.   **Upgrade of Core Router** – The existing Core Router Cisco ASR1004 does not have 10G ports. Also due to increase number of horizontal circuits the requirement of WAN ports have increased. Therefore additional interface card with 2x10G and 20x1G ports will be required to upgrade within the existing router.

2.   **Upgrade of Internet Gateway Router** –The existing Cisco router installed in year 2009 has become obsolete. Higher capacity router with 10G Optical Fibre Interface module and with 10x throughput has been proposed for handling enhanced internet traffic. The router will also be used as a VPN server and the existing configuration of the router should be transferred to the new router with minimum down time in customer service.

3.   **Firewall** – The existing firewall (Cisco FWSM) allows or blocks traffic based on a predefined set of security rules / policy and maintains 3 layer security architecture based on the level of security requirement. WBSWAN Firewall is monitoring and controlling traffic between WBSWAN and other networks such as Internet, NICNet, SDC and NDC. It has been deployed in 1+1 redundant mode and will become End of Support in 2018 and hence to be replaced. The configuration of existing firewall should be transferred to the new firewall at the time of replacement with minimum down time in customer service.

4.   **Core switch at SHQ** – the existing Cisco L3 core switch with 48 ports (Gigabit Ethernet in 1+1 redundant mode) at SHQ will become End of Support in 2018. Considering increasing traffic volume, similar switch with 10x data handling capacity is proposed. The existing switch configuration has to be transferred to the new switch at the time of replacement so that network downtime will be minimum.

5.   **NMS (Network Management System) -** A network management system (NMS) is a set of hardware and/or software tools that allow the system administrator to supervise the individual components of a network within a larger network management framework. The Network Management Application software usually gets installed in a set of server(s) for various dedicated applications. IBM Tivoli management suite infrastructure deployed in WBSWAN for management of 426 vertical POPs have reached End of Life, hence replacement is required. At present monitoring and management of 500 horizontal circuits is being done using CA NMS tool, which was deployed for management of maximum 600 horizontally connected nodes. The same CA NMS tools may be upgraded with additional 400 licenses for accommodating total 1000 nodes/circuits (vertical + horizontal) under WBSWAN at present. CA Help-desk module was not implemented earlier hence CA Help-desk software with 30 user license is required as fresh supply and implementation of the same will be done by the bidder.

Network management system components include:

Network device discovery - identifies the devices (all versions of SNMP activated) present on a network.

Network device monitoring - monitoring at the device level to determine the health of network components and the extent to which their performance matches capacity plans and intra-enterprise service-level agreements (SLAs).

Network performance analysis - tracking performance indicators such as bandwidth utilization, packet loss, latency, availability and uptime of routers, switches and other Simple Network Management Protocol (SNMP) -enabled devices.

Intelligent notifications - configurable alerts that will respond to specific network scenarios by paging, emailing, calling or texting a network administrator.

Helpdesk – automatic ticket generation, tracking and closing of circuit faults, reporting all incidents and SLA parameters for network management purpose. The helpdesk module should have minimum 30 concurrent user license.

Log server – The NMS tool should also provide a backup solution that should be able to take automated backup of system logs, firewall logs, UTM logs, NMS logs, email databases, VC sessions, etc, from various systems running at WBSWAN SHQ.

6.   **Augmentation of server capacity in SHQ –** Existing IBM P Series servers for Lotus Notes E-Mail, IBM Tivoli Management Suite, etc are running on AIX operating system and will NOT be end of support before 2019, hence not proposed for replacement now. However existing AAA server (TACACS), Proxy Server, Log Server, DNS Server, Anti-Virus server, etc have become end of life, hence there is a requirement of 4 additional Intel servers (with virtualization) to cater to the needs of about 8 virtual servers with Windows, Redhat Linux and Sure Linux based on requirement of applications. CA NMS, Helpdesk, Log Server, DNS, Proxy, POP3, Antivirus, IMSS, etc will need enhanced server capacity due to the increased network traffic/user load.

7.   **Video Conference Systems – Upgradation of existing Multi-point Control Unit (MCU) and replacement of desktop based software video conference system (INVC)** - The existing MCU is Polycom RMX2000. It has 45 ports which means only 45 concurrent users/end points can participate in a single or multiple VC sessions. The other desktop based INVC system has a server with 425 licenses dedicated for use at 425 vertical POPs at the State, District, Sub-division and Block Head Quarters. The INVC system can be used for maximum 4 multiple concurrent VC sessions in the state and district levels. However the desktop INVC system has become obsolete now. It runs only on Windows XP system and there is no upgrade or support available from OEM on the same platform. The system has become non functional in some districts. With increasing need for concurrent video conference sessions from the departments and district head quarters, the proposed MCU should have the capacity of at least 190 concurrent participants (90 simultaneous participants from hardware based studio type end points considering 3 concurrent sessions of 30 users in each session + 100 concurrent participants from desktop / laptop computers with software client licenses considering 4 such concurrent sessions of 25 users in each session). The MCU should be one single integrated platform with total capacity of at least 190 concurrent users of hardware end point and software client based systems in a single or multiple VC sessions and it should have the capability to run at least 10 concurrent VC sessions from day 1. Apart from participation from internal SWAN VC users at the State, District, Sub-division, Block Head Quarters and Horizontal offices, there should be facility of at least 25 concurrent users' participation over internet. The current MCU is having this facility and it should be available in the new / upgraded system also from day 1. The existing VC systems (MCU based studio type system and INVC the software based desktop video conferencing system) deployed in WBSWAN are not integrated and are running separately causing lot of inconvenience to the user departments. Therefore the proposed new / upgraded system should be one single integrated system (MCU) to allow any combination of hardware end point and software client based users in a single / multiple VC sessions within the limit of total 190 concurrent users. The other system features like management, recording, gatekeeper and firewall should be available in a single server or integrated through multiple servers.

8.   **Upgradation of VoIP system –** Existing VoIP system is a Cisco UCSC-C240-M4S2 box running with CUCM version 10.5.2. It has 771 VoIP device licenses. The upgraded VoIP system should have 900 VoIP device licenses and it should be integrated with other CUCM servers running at various district head quarters such that the VoIP devices of the district CUCM will be able to seamlessly communicate with the VoIP devices of the State CUCM.

9.   **Upgradation of Routers:** The routers installed at SHQ, DHQ, SDHQ, BHQ and Horizontal offices transfer information packets between self-contained networks (LAN) over WBSWAN backbone. It is considered to be the most critical equipment in WBSWAN infrastructure. Every WBSWAN POP is connected using a router, which is processing traffic to and from Internet, Intranet, SDC, LAN, WAN, NKN, NICNet, etc and also ensuring QoS and link redundancy, if required. All DHQ, SDHQ and BHQ routers have become obsolete/ End of Support. Hence new routers will be required to replace the

9

obsolete routers. Router replacement must be done by transferring the existing configuration parameters from old to the new router to minimize outage of service to the connected departments/users.

- **DHQ Routers** – Existing DHQ routers Cisco VSX7206 (18 nos.) have become End of Support in Sept 2017 and are to be replaced. The proposed routers will support higher throughput and have Optical Fibre modules for direct termination of optical fibre link.

- **SDHQ and BHQ Routers** – Existing routers (65 Cisco 3845 + 341 Cisco 2811 routers) are already End of Support (EOS) and are to be replaced. The proposed routers will support higher throughput and have Gigabit Optical Fiber modules for direct termination of optical fibers and integration with Bharatnet.

10. **Upgradation of Switches:** Both L2 and L3 switches are used in SHQ and DHQ POPs and some Horizontal offices. L2 switches are used in SDHQ and BHQ POPs. VLANs are created at all tiers of WBSWAN and inter VLAN routing with/without firewalling are implemented in SHQ and DHQ and some horizontal offices based on requirement. Switch replacement must be done by transferring the existing configuration parameters from old to the new switch to minimize outage of service to the connected departments/users.

- **DHQ Switches** – Existing Cisco L3 switches at DHQs (18 nos) are EOS since 2016. Similar L3 switches with OFC interface module with higher capacity is proposed for replacement.
- **SDHQ and BHQ switches** - Existing Cisco L2 switches (65+ 341) are also proposed to be replaced as they have reached EOS.

11. **UPS** – All existing UPS systems at the DHQs (18 nos 6 KVA in 1+1 redundant mode) , SDHQs and BHQS (65 nos and 341 nos 2 KVA UPS systems respectively) have reached End of Life since 2016 and need to be replaced.

12. **UPS batteries** – Batteries are to be replaced periodically as consumables. Most of the existing batteries are in use for last 2-3 years and are almost exhausted. Hence replacement of batteries along with UPS has been proposed. Since UPS capacity is not changing, UPS battery requirement will remain similar. Hence there is no need to supply new battery racks and existing battery racks can be reused at the time of installing new UPS with battery.

Note:

The bidder will deliver procured materials at 430 WBSWAN POP locations as per location-wise distribution matrix of materials attached with the tender document /purchase order. After delivery, installation of materials will be done by the bidder as per preplanned installation schedule. Travel / accommodation of the engineers for installation of equipment at POP locations will be bidder's responsibility. WBSWAN operation and support person will be available at every POP location for any support required by the bidder at the time of delivery and installation. List of location-wise WBSWAN personnel will be shared with the L1 bidder in due course of time.

As this is a refresh project bidder need to ensure that quoted product should be integrated with existing infrastructure. Bidder may seek clarification during pre-bid for the same. This is to ensure proper integration of existing and new infrastructure during implementation phase without any service outage during prime working hours. Planned downtime required for upgrade/replacement of any equipment must be scheduled outside prime working hours at SHQ and DHQ POPs. Prime working hours will be from 10AM to 6PM from Monday to Friday. Network Downtime should not be more than 3 hours per day during non prime hours/holidays at these locations. Max 2 Hours' prescheduled down time may be allowed at SDHQ and BHQ POPs during working hours with permission from the concerned authority. During bid submission bidder should submit a declaration to this effect.

WEBEL TECHNOLOGY LIMITED

The present proposal considers warranty support for 3 years for all hardware and software items including UPS (except UPS batteries which will have 2 years warranty coverage).However all quoted hardware and software items must have OEM support coverage for at least 5 years after supply and installation and must not be End of Sale within 2 years from the bid submission date. This is required to ensure seamless support for extended period beyond 3 years warranty coverage period.

WEBEL TECHNOLOGY LIMITED

SECTION – B

ELIGIBILITY CRITERIA

Sl. No.	Eligibility Criteria	Documents to be submitted
1	The Bidder should be registered under the Companies Act, 1956 or Companies Act 2013, and should have been in existence for the last 5 (five) years in the field of Network Operations and related Facility Management Services in India.	Certificate of Incorporation
2	The bidder should have an annual turnover of not less than Rs.250 Crore each in the three financial years (FY – 2014-15, 2015-16 & 2016-17). Bidder shall have to submit photocopy of Audited Accounts in support of their claim.	Photocopy of Audited Accounts or audited profit and loss account/ Statutory Auditors Certificated letter
3	The bidder shall have Quality Certificate (ISO 9001:2008) and ISO 27001 at the time of submission of the bid (bidder has to ensure that the certificate remains valid during the life cycle of the project).	Copy of valid Certificate to be submitted
4	The Bidder must have minimum 300 resources in the field of data and voice networking ,computing and IT services	
5	The bidder shall not have been blacklisted by any State/Central Government or PSU Organization or bilateral/multilateral funding agencies for breach of ethical conduct or fraudulent practices as on date of submission of the proposal.	Declaration to be submitted duly notarized affidavit in this regard.
6	The bidder should have valid GST Registration Number & PAN.	Photocopy of the documents to be submitted.
7	The bidder shall have **successfully completed or running for more than 1 year** any one of the following: 1:- 1 project of minimum 200 WAN nodes 2:- 2 projects with cumulative 250 WAN node 3:- 3 projects with cumulative 300 WAN nodes	PO/Work Order/Agreement/Contact/Payment receipt /Completion Certificate from Client to be submitted.
8	The Bidder should have experience of implementing and managing 2 SWANs or wide area networking project order value worth min INR 15 Crore each in India in the last 5 financial years (FY – 2012-13, 2013- 14, 2014-15, 2015-16 & 2016-17)	PO/Work Order/Agreement/Contact/Payment receipt /Certificate from Client to be submitted.
9	The Bidder must have a registered office in Kolkata or an Undertaking required to be submitted with the bid to open a local office within 30 days from agreement signing	Undertaking/Office Documents
10	Bidder should submit Earnest Money Deposit (EMD) of Rs. 0.00 (Rupees only) in the form of Demand Draft from any Scheduled Bank in favour of Webel Technology Limited payable at Kolkata.	Demand Draft to be submitted
11	Bidder should submit Tender Fee of of Rs. 6,000.00 (Rupees Six thousand only) in the form of Demand Draft from any Scheduled Bank in favour of Webel Technology Limited payable at Kolkata.	Demand Draft to be submitted
12	The bidder shall submit Bid Form (Section – E) duly signed	Declaration as per format in letter

	by the authorized signatory of the company as per the format enclosed. Deviation in format may not be accepted.	head
13	Manufacturer's tender specific authorizations for UPS, UPS Battery, Server, Desktop, NMS, All Active Networking Components, Video Conference System & Display Units must be submitted as per format enclosed (Section - P).	MAF to be submitted as per format

Eligibility Criteria for OEMs of Active Components

1	The OEM for Active devices must be listed in Gartner Magic Quadrant (Leaders/ Challengers) for last 5 years.
2	The OEM of the network product should have well established manufacturing plant/ Research & Development Lab in India.
3	All active network devices (router and switches) and AAA server quoted by the bidder should be from a single OEM only and it should be supported by NMS. The NMS should have the capabilities to support the existing Network, with single pane of glass. (The OEM should submit a certificate to this effect)
4	The OEM of active network devices to be quoted by the bidder should have local Technical Assistance Centre (TAC) support in India and Returned Materials Authorization (RMA) depot in West Bengal.
5	The OEM of active network devices to be quoted by the bidder should be present in the country from at least past 7 years.
6	The OEM whose active components are being quoted by the bidder should have posted profit in last seven years.
7	All products being quoted should be available as on date with the OEM and should be publicly reference-able. During technical evaluation clarification may be sort from OEM.
8	As this is a refresh project bidder needs to ensure that quoted product should be integrated with existing infrastructure, clarification may be sort during pre-bid for the same. During bid submission bidder should submit a certificate to this effect. This is to ensure proper integration of existing and new infrastructure during implementation phase without any service outage during prime working hours. Planned downtime required for upgrade/replacement of any equipment must be scheduled outside prime working hours (Monday to Friday, 9AM to 7PM) and should not be more than 2 hours per day during non prime hours/holidays.
9	OEM should have minimum 500 Cr. Turnover in India.
10	OEM should have minimum 1000 Employee on company payroll.
11	OEM shall have certification ISO 9001:2008 & ISO 14001.
12	The OEM for both Wired and Wireless and Voice and VIDEO should be in Gartner's Leader or Challenger Quadrant for a consecutive period of 5 years

Eligibility Criteria for OEM of UPS

1	Manufacturer for the following items - UPS, TVSS and Software for Monitoring - must be ISO 9001:2008 & ISO 14001 certified. Please enclose the certificates.
2	The maker of proposed UPS system must be proven in terms of service support in West Bengal and should fulfill the following criterion: a. The maker of UPS proposed must be in use in at least 3 government projects in West Bengal with a minimum installation base of 100 UPS systems in each of these projects b. Each of these projects should have an installation in each and every district of West Bengal c. The UPS should be in service for at least 5 Years for each of these projects
3	Bidders are requested to submit the Model, Rating, Location of Installation (District Wise) and Project Name of these Installations along with contact person name, contact details, email address and mailing address of Government Employee who can correctly verify the information provided.

All related documents to be submitted

WEBEL TECHNOLOGY LIMITED

SECTION – C

DATE AND TIME SCHEDULE

Sl. No.	Particulars	Date & Time
1	Date of uploading of N.I.T. & other Documents (online) (Publishing Date)	15.01.2018
2	Documents download/sale start date (Online)	15.01.2018
3	Last Date and time of sending the queries (Offline)	18.01.2018 at 16.00 hrs
4	Pre Bid Meeting at WTL Office (Off Line)	19.01.2018 at 11.30 hrs
5	Corrigendum, if any will be published (On Line)	-
6	Bid Submission start date & time (On line)	30.01.2018 at 15.00 hrs
7	Last Date & time of submission of original Demand Draft/Pay Order for cost of Earnest Money Deposit (Off line)	07.02.2018 at 11.00 hrs
8	Last Date & time of submission of original Demand Draft/Pay Order for Tender Fee	07.02.2018 at 11.00 hrs
9	Bid Submission closing date & time (On line)	05.02.2018 at 12.00 hrs
10	Bid opening date & time for Technical Proposals (Online)	07.02.2018 at 12.00 hrs
11	Date of uploading the final list of Technically Qualified Bidder (online) after disposal of appeals, if any	-
12	Date for opening of Financial Bid (Online)	-

WEBEL TECHNOLOGY LIMITED

SECTION – D

INSTRUCTION TO BIDDER

1. DEFINITIONS

In this document, the following terms shall have following respective meanings:

"**Acceptance Test Document**" means a document, which defines procedures for testing the functioning of installed system. The document will be finalized with the contractor within 7 days of issuance of the Letter of Award/Confirm Work Order.

"**Agreement**" means the Agreement to be signed between the successful bidder and WTL including all attachments, appendices, all documents incorporated by reference thereto together with any subsequent modifications, the RFP, the bid offer, the acceptance and all related correspondences, clarifications, presentations.

"**Bidder**" means any firm offering the solution(s), service(s) and /or materials required in the RFP. The word Bidder when used in the pre award period shall be synonymous with Bidder, and when used after award of the Contract shall mean the successful Bidder with whom WTL signs the agreement for supply, install, commission and render services for the systems.

"**Contract**" is used synonymously with Agreement.

"**Contract Price**" means the price to be paid to the Contractor for providing the Solution, in accordance with the payment terms.

"**Contractor**" means the Bidder whose bid to perform the Contract has been accepted by Tender Committee and is named as such in the Letter of Award.

"**Default Notice**" shall mean the written notice of Default of the Agreement issued by one Party to the other.

"**Installation**" shall mean Implementation of WBSWAN Technology Refresh.

"**Fraudulent Practice**" means a misrepresentation of facts in order to influence a procurement process or the execution of a Contract and includes collusive practice among Bidders (prior to or after Bid submission) designed to establish Bid prices at artificial noncompetitive levels and to deprive the benefits of free and open competition.

"**Good Industry Practice**" shall mean the exercise of that degree of skill, diligence and prudence which would reasonably and ordinarily be expected from a reasonably skilled and experienced Operator engaged in the same type of undertaking under the same or similar circumstances.

"**Government**" / "**Gov. of W. Bengal**" means the Government of West Bengal.

"**GoI**" shall stand for the Government of India.

"**GoWB**" means Government of West Bengal

"**WTL**" means Webel Technology Limited a Gov. of W. Bengal undertaking.

"**Personnel**" means persons hired by the Bidder as employees and assigned to the performance of the Infrastructure Solution or any part thereof.

"**Project**" means Implementation of WBSWAN Technology Refresh.

WEBEL TECHNOLOGY LIMITED

"**Project Plan**" means the document to be developed by the Contractor and approved by WTL, based on the requirements of the Contract and the Preliminary Project Plan included in the Contractor's bid. For the sake of clarity, the Agreed and Finalised Project Plan" refers to the version of the Project Plan submitted by the contractor after receiving the letter of Award and the same approved by WTL. The project plan may be changed/ modified during the course of the project. Should the Project Plan conflict with the provisions of the Contract in any way, the relevant provisions of the Contract, including any amendments, shall prevail.

"**Services**" means the work to be performed by the Bidder pursuant to this Contract, as described in the detailed Scope of Work.

"**Similar Nature**" includes Implementation WBSWAN Technology Refresh.

"**Interest rate**" means "364 days Government of India (GoI) Treasury Bills" rate.

"**Law**" shall mean any Act, notification, bye law, rules and regulations, directive, ordinance, order or instruction having the force of law enacted or issued by the Central Government and/or the Government of West Bengal or any other Government or regulatory authority or political subdivision of government agency.

"**LOI**" means issuing of Letter of Intent shall constitute the intention of the WTL to place the Order with the successful bidder.

"**Operator**" means the company providing the services under Agreement.

"**Period of Agreement**" means 3 years from the date of Final acceptance of the Project.

"**Requirements**" shall mean and include schedules, details, description, statement of technical data, performance characteristics, standards (Indian as well as International) as applicable and specified in the Contract.

"**Service**" means provision of Contracted service viz., operation, maintenance and associated services for DEPLOYED SYSTEMS as per Section titled "Scope of Work"

"**Termination Notice**" means the written notice of termination of the Agreement issued by WTL.

"**Uptime**" means the time period when specified services are available with specified technical and service standards as mentioned in section titled WARRANTY SUPPORT" "**%Uptime**" means ratio of 'up time' (in minutes) as mentioned in section titled "Warranty support"

"**Service Down Time**" (SDT) means the time period when specified services with specified technical and operational requirements as mentioned in section titled "WARRANTY SUPPORT"" are not available to Gov. of W. Bengal and its user departments and organizations.

2. **PRE BID MEETING**
   Pre Bid Meeting will be held on 19.01.2018 at 11.30 hrs at premises of WTL. Bidder can send their queries as per format (Section - M) to Manager (Purchase) (wtlpurchase@gmail.com) and copy to Ms. Soma Dey (soma@wb.gov.in) / Ms. Anita Dey (wtladety@gmail.com). Only the queries received within the stipulated date prior to the Pre Bid Meeting will be answered. The entrance to the Pre Bid Meeting will be limited to two persons per bidder and carrying valid authorization letter on official letter head bearing company seal.

3. **COST OF BIDDING**
   The bidder shall bear all costs associated with the preparation and submission of the bid and WTL will no case be responsible for those costs regardless of the conduct or outcome of the bidding process.

4. **BID DOCUMENT**

WEBEL TECHNOLOGY LIMITED

Bidder is expected to examine all instructions, forms, terms and requirement in the bid document. The invitation to bid together with all its attachment thereto shall be considered to be read, understood and accepted by the bidder unless deviations are specifically stated in the seriatim by the bidder. Failure to furnish all information required by the bid document or a bid not substantially responsive to the bid document in every respect may result of the bid.

5. **AMENDMENT OF BID DOCUMENT**

At any time prior to the deadline for submission of proposals, WTL reserves the right to add/modify/delete any portion of this document by issuance of an Corrigendum, which would be published on the website and will also be made available to the all the Bidder who have been issued the tender document. The Corrigendum shall be binding on all bidders and will form part of the bid documents.

6. **MODIFICATION AND WITHDRAWAL OF BIDS**

The bidder cannot modify or withdraw its bid after submission.

7. **LANGUAGE OF BID & CORRESPONDENCE**

The proposal will be prepared by the Bidder in English language only. All the documents relating to the proposal (including brochures) supplied by the firm should also be in English, and the correspondence between the Bidder & WTL will be in English language only. The correspondence by fax/E-mail must be subsequently confirmed by a duly signed formal copy.

8. **BIDDER'S SOLUTION**

The bidders are requested to study the Bill of Material supplied with this document carefully. While working out the solution the bidder has to work with the broad minimum specification provided in the tender documents, conforming to the model, make and Part number (wherever provided). While submitting the bid the bidder has to detail out all components needed to complete the system BOM. The bidder is required quote for each item retaining all major components/sub system detailed and specified. As the contractor will be responsible for smooth functioning of the system, availability of spares during the tenure of the warranty period have to be take care by the contractor to maintain the guaranteed uptime.

9. **EARNEST MONEY DEPOSIT (EMD)**

The firm shall furnish an EMD of Rs.50,00,000.00 (Rupees Fifty lakh only) in the form of a demand draft from a Scheduled Bank payable at Kolkata and in favour of Webel Technology Limited. Any bid not accompanied with the EMD shall be rejected. The validity of EMD instrument will be initially 3 months, have to extend, if required.

10. **FORFEITURE OF EMD**

EMD made by Bidder may be forfeited under the following conditions:

If Bidder withdraws the proposal before the expiry of validity period.

During the evaluation process, if a Bidder indulges in any such activity as would jeopardize the process, the decision of WTL regarding forfeiture of EMD shall be final and shall not be called upon question under any circumstances.

If Bidder violates any of the provisions of the terms and conditions of the proposal.

In the case of a successful Bidder, if Bidder fails to:
a) Accept the work order along with the terms and conditions.
b) Furnish performance security.
c) Violates any of the work conditions of this proposal or indulges in any such activities as would jeopardize the work.
d) Submitting false/misleading information/declaration/documents/proof/etc.

The decision of WTL regarding forfeiture of EMD shall be final and shall not be called upon to question under any circumstances, besides, forfeiture of EMD even the Bidder will be deferred from participating in any job for a period of one year.

11. FORMS AND FORMATS

The various inputs for the Techno Commercial as Financial Bids are to be submitted in the format specified. The bidder shall use the form, wherever specified, to provide relevant information. If form does not provide space for any required information, space at the end of the form or additional sheets shall be used to convey the said information. For all other cases, the bidder shall design a form to hold the required information.

12. LACK OF INFORMATION TO BIDDER

The bidder shall be deemed to have carefully examined the Bid document to his entire satisfaction. Any lack of information shall not relieve the bidder of his responsibility to fulfill his obligation under the bid. If bidder has any queries relating to bid document then he can send the queries before the Pre Bid Meeting.

13. CONTRACT EXECUTION

On receipt of the Letter of Award the contractor should submit a Performance Bank Guarantee (PBG) equivalent to 10% of the total contract value within three weeks from the date of receipt of Letter of Award/Order. The PBG should be valid for six month more than the warranty period. All delivery of the material will have to be completed within 45 days from the date of acceptance of contract and the contractor has to ensure all activities leading to the commissioning of the contract to be completed within 90 days from the date of award. Subsequent to the award of contract, the contractor will have to arrange for the requisite material as per BOM.

14. TIME SCHEDULE FOR DELIVERY & INSTALLATION

The total delivery should be completed within 4 weeks from the date of order. Installation & commissioning should be completed within 6-8 weeks from the date of Order.

15. LIQUIDATED DAMAGE

The job includes the supply and installation of materials mentioned in the tender document. In the event of failure to meet the job completion in stipulated date/time liquidated damage may be imposed on the contractor for sum not less than 0.5% of the contract value for undelivered/installed items, each week or part thereof, subject to a ceiling of 10% of the total contract value (including all taxes & duties and other charges). In the event of LD exceeds 10% of the order value, WTL reserves the right to terminate the contract and WTL will get the job completed by any other competent party. The difference of cost incurred by WTL will be recovered from the contractor and PBG will be invoked.

16. LIABILITY

In case of a default on bidder's part or other liability, WTL shall be entitled to recover damages from the Contractor. In each such instance, regardless of the basis on which WTL is entitled to claim damages from the Contractor (including fundamental breach, negligence, misrepresentation, or other contract or tort claim), Contractor shall be liable for no more than:

- Payment referred to in the Patents and Copyrights clause.
- Liability for bodily injury (including death) or damage to real property and tangible personal property limited to that cause by the Contractor's negligence.
- As to any other actual damage arising in any situation involving nonperformance by Contractor pursuant to or in any way related to the subject of this Agreement, the charge paid by WTL for the individual product or Service that is the subject of the Claim. However, the contractor shall not be liable for
- For any indirect, consequential loss or damage, lost profits, third party loss or damage to property or loss of or damage to data.

For any direct loss or damage that exceeds the total payment for Contract Price made or expected to be made to the Contractor hereunder.

17. PATENTS & COPYRIGHT

If a third party claims that a product delivered by the Contractor to WTL infringes that party's patent or copyright, the Contractor shall defend WTL against that claim at Contractor's expense and pay all costs, damages, and attorney's fees that a court finally awards or that are included in a settlement approved by the Contractor, provided that WTL.

- Promptly notifies Contractor in writing of the claim
- Allows Contractor to control and co-operate with Contractor in the defense and any related settlement negotiations.

Remedies: If such a claim is made or appears likely to be made, WTL would permit Contractor to enable WTL to continue to use the product, or to modify it, or replace it with one that is at least functionally equivalent. If Contractor determines that none of these alternatives is reasonably available, WTL agrees to return the product to Contractor on Contractor's written request. Contractor will then give WTL a credit equal to for a machine. WTL's net book value (provided WTL has followed generally accepted accounting principles for a generally available software product produced by Contractor (Program) the amount paid by WTL or 12 months charges (whichever is lesser) and for materials the amount paid by WTL for the materials. These will be Contractor's entire obligation regarding any claim of infringement.

18. SUSPENSION OF WORK

WTL shall have the power at any time and from time to time by notice to the Contractor to delay or suspend the progress of the work or any part of the work due to any other adequate reasons and on receipt of such notice the contractor shall forthwith suspend further progress of the work until further notice from WTL. The Contractor shall recommence work immediately after receiving a notice to do so from WTL. The whole or any part of the time lost for such delay or suspension shall, if WTL in its absolute discretion thinks fit, but not otherwise, be added to the time allowed for completion.

19. TERMS OF PAYMENT

Payment terms will be on back-to-back basis, i.e., payment will be made only on receipt of payment from relevant customer. A scheduled payment terms depicted below:
  a. 50% against delivery on submission of invoice with all relevant documents.
  b. 30% after installation
  c. 20% after project completion

20. GOVERNING LAWS

This contract should be governed by and interpreted by Arbitration clause in accordance with Laws in force in India. The courts at Kolkata shall have exclusive jurisdiction in all matters arising under the contract. The selected vendor shall keep himself fully informed of all current national, state and municipal law and ordinances. The selected vendor shall at their own expense, obtain all necessary permits and license and pay all fees and taxes required by law. These will be selected vendor's entire obligation regarding any claim of infringement. The selected vendor hereto agrees that it shall comply with all applicable union, state and local laws, ordinances, regulations and codes in performing its obligations hereunder, including the procurement of licenses, permits certificates and payment of taxes where required. The selected vendor shall establish and maintain all proper records (particularly, but without limitation, accounting records) required by any law, code/practice of corporate policy applicable to it from time to time including records and returns as applicable under labor legislation.

21. CORRUPT OR FRAUDULENT PRATICES

The Tender Committee requires that the bidders under this Tender observe the highest standards of ethics during the procurement and execution of such contracts. For this purpose the definition of corrupt and fraudulent practices will follow the provisions of the relevant laws in force. The Tender Committee will reject a proposal for award if it detects that the bidder has engaged in corrupt or fraudulent practices in competing for the contract in question. The Tender Committee will declare a firm ineligible, either indefinitely or for a stated period of time, if it at any time determines that the firm has engaged in corrupt and fraudulent practices in competing for, or in executing, a contract.

22. BINDING CLAUSE

All decisions taken by the Tender Committee regarding the processing of this tender and award of contract shall be final and binding on all parties concerned. The Tender Committee reserves the right:

- To vary, modify, revise, amend or change any of the terms and conditions mentioned above and,
- To reject any or all the Tender/s without assigning any reason whatsoever thereof or to annul the bidding process and reject all bids at any time prior to award of contract, without thereby incurring any liability to the affected bidder(s) or any obligation to inform the affected bidder(s) of the grounds for such decision.

23. WORKMEN'S COMPENSATION

In every case in which by virtue of the provision of the workmen's compensation Act 1923 or any other relevant acts and rules, compensation to a workmen employed by the contractor, is payable, then this should be done by the Contractor. If WTL is obliged to make any compensation under the said rules and acts, then the amount shall be recovered without prejudice, from the bills and due of the Contractor. WTL shall not be bound to contest any claim made against the Contractor in respect of workmen's compensation.

24. CONTRACTOR'S EMPLOYEES

The Contractor shall comply with the provision of all labour legislation including the requirement of the payment of Wage Act 1936 and the rules framed there under and modifications thereof in respect of men employed by him in carrying out the contract. The Contractor must ensure that he complies with PF, ESI regulation for all his deployed employees. The Contractor shall see that all authorized Sub Contractors under him similarly complied with the above requirement.

25. SAFETY MEASURES

The Contractor shall in the course of execution of the work take all necessary precaution for the protection of all persons and property. The Contractor shall take adequate measures to protect the work and present accident during the work. In the event of any accident to any person or persons or damage or injury of any description to any person or property due to failure on the part of the contractor in taking proper precautionary measures the contractor shall be responsible for and must make good the loss the damage at his own cost to the satisfaction of the department and employees of the department shall be indemnified from all claims or liabilities arising there from or any expenses incurred on account thereof.

26. EQUIPMENT

All tools & tackles necessary for the work shall have to be procured by the contractor unless other wise specified elsewhere in these tender documents. The equipment used by the contractor for a particular work must be appropriate for the type of work. The contractor shall maintain the equipment used on the work properly so that they are in good working condition. In no case shall the contractor use defective or imperfect equipment in the work. The contractor shall arrange to replace or repair all defective equipment so that the progress of the work is not hampered. No defective equipment should be left at the site of work and the department shall not be responsible for any loss or damage to any of these equipments during the course of the execution of the work.

27. SUB-CONTRACT

The purchaser (WTL) does not recognize the existence of Sub-Contractors. The Contractor's responsibility is not transferable.

28. TERMINATION FOR DEFAULT

WTL may without prejudice to any other remedy or right of claim for breach of contract by giving not less than 30 days written notice of default sent to the contractor, terminate the order in whole or in part. If the contractor materially fails to render any or all the services within the time period specified in the contract or any extension thereof granted by WTL in writing and fails to remedy its failure within a period of thirty days after receipt of default notice from WTL. If the project (delivery, commissioning as well as warranty maintenance support is not carried out according to specification due to deficiency in service as per terms of the contract. In such case WTL will invoke the amount held back from the contractor as PBG.

29. BANKRUPTCY

If the contractor becomes bankrupt or have a receiving order made against him or compound with his creditors or being a corporation commence to be wound up, not being a voluntary winding up for the purpose only or amalgamation or reconstruction, or carry on their business under a receiver for the benefit of their creditors or any of them, WTL shall be at liberty to terminate the engagement forthwith without any notice in writing to the contractor or to the liquidator or receiver or to any person in whom the contractor may become vested and without any compensation to give such liquidator or receiver or other person the option of carrying out the engagement subject to their providing a guarantee for the due and faithful performance of the engagement up to an amount to be determined by WTL.

30. FORCE MAJEURE

It is hereby defined as any cause, which is beyond the control of the Contractor or WTL as the case may be, which such party could not foresee or with a reasonable amount of diligence could not have foreseen and which substantially affect the performance of the contract, such as

- War, Hostilities or warlike operations (whether a state of war be declared or not), invasion, act of foreign enemy and civil war.
- Rebellion, revolution, insurrection, mutiny, usurpation of civil or military, government, conspiracy, riot, civil commotion and terrorist area.
- Confiscation, nationalization, mobilization, commandeering or requisition by or under the order of any government or de facto authority or ruler, or any other act or failure to act of any local state or national government authority.
- Strike, sabotage, lockout, embargo, import restriction, port congestion, lack of usual means of public transportation and communication, industrial dispute, shipwreck, shortage of power supply epidemics, quarantine and plague.
- Earthquake, landslide, volcanic activity, fire flood or inundation, tidal wave, typhoon or cyclone, hurricane, nuclear and pressure waves or other natural or physical disaster.

If either party is prevented, hindered or delayed from or in performing any of its obligations under the Contract by an event of Force Majeure, then it shall notify the other in writing of the occurrence of such event and the circumstances of the event of Force Majeure within fourteen days after the occurrence of such event. The party who has given such notice shall be excused from the performance or punctual performance of its obligations under the Contract for so long as the relevant event of Force Majeure continues and to the extent that such party's performance is prevented, hindered or delayed.

The party or parties affected by the event of Force Majeure shall use reasonable efforts to mitigate the effect of the event of Force Majeure upto its or their performance of the Contract and to fulfill its or their obligation under the Contract but without prejudice to either party's right to terminate the Contract.

No delay or nonperformance by either party to this Contract caused by the occurrence of any event of Force Majeure shall.

- Constitute a default or breach of the contract.
- Give rise to any claim fro damages or additional cost or expense occurred by the delay or nonperformance. If, and to the extent, that such delay or nonperformance is caused by the occurrence of an event of Force Majeure.

31. INSURANCE COVERAGE

Appropriate insurance to cover all solution components for the transit period and until the time of its acceptance at the respective site is to be taken by the contractor. As the contractor will carry the risk for the material in his books during transit, the contractor should arrange insurance for the total system as period from the dispatch till Acceptance Test is successfully achieved. Further the contractor is to take all required insurance coverage in respect of all its personnel who shall be working on this engagement.

32. WARRANTY

The Bidder/OEM will warranty for all equipments/ services for 3 years from the date of implementation/ acceptance and that the products supplied under the contract are newly made and are free from defects in the design, engineering and workmanship. The bidder would be responsible for the up keep, re-installation, configuration, re-configuration, tuning, documenting and maintenance of the infrastructure

and necessary deliverables under the scope of work during the entire warranty period of three years for all items of BOM from the date of final acceptance of the system by the customer. The bidder shall not, without the express prior written consent of WTL, assign to any third party of the contract or part thereof. Service support for the entire warranty period will be on site and comprehensive (including spares) and free of cost for the entire warranty period. All relevant documents against the warranty support to be submitted.

33. WARRANTY SUPPORT

The total system will be warranted against bad workmanship and manufacturing defects for 36 months from the date of acceptance of the system whole or part. Service support for the entire warranty period will be on site and comprehensive (including spares and all other support) and free of cost for the entire warranty period. The bidder should have a call centre in Kolkata. The contact details of the call centre must be furnished along with the bid. Any call logged with the service centre must be given a running docket number to the person reporting the call. Maximum response time – Next Business day. Call resolution time – 48 hrs maximum. If the uptime goes below the prescribed limit in any quarter, the same will be noted. At the scheduled end of the warranty period the total of such deviation will be done and the contractor will have to extend the warranty support by the default time. Penalty shall be deducted for deviation of warranty support.

34. PERFORMANCE BANK GUARANTEE (PBG)

As a guarantee for timely delivery, installation and commissioning of equipment as well as performance of on-site warranty support, as mentioned in Bill of Material, from the date of final acceptance of systems and pertaining to proper running of the systems, the bidder will have to submit 10% of the contract value as security in the form of Performance Bank Guarantee from any nationalized bank as per format enclosed (Section – T).

35. SI/BIDDER/CONTRACTOR'S RESPONSIBILITIES

Refer Section - A

36. NO WAIVER OF RIGHTS

Neither the inspection by WTL or any of their agents nor any order by WTL for payment of money or any payment for or acceptance of the whole or any part of the works by WTL, nor any extension of time, nor any possession taken by WTL shall operate as a waiver of any provision of the contract or of any power reserved to WTL, or any right to damages here in provided, nor shall any waiver of any breach in the contract be held to be a waiver of any other subsequent breach.

37. ENFORCEMENT OF TERMS

The failure of either party to enforce at any time any of the provision of this contract or any rights in respect thereto or to exercise any option here in provided shall in no way be construed to be a waiver to such provisions, rights or options or in any way to affect the validity of the contract. The exercise by either party of any of its rights herein shall not preclude or prejudice either party from exercising the same or any other right it may have hereunder.

38. PERIOD OF VALIDITY OF OFFER

For the purpose of placing the order, the proposals shall remain valid till 180 days. During the period of validity of proposals, the rates quoted shall not change. In exceptional circumstances, WTL may ask for extension of the period of validity and such a request shall be binding on Bidders. WTL's request and the response to such a request by various Bidders shall be in writing. A Bidder agreeing to such an extension will not be permitted to increase its rates.

39. TAXES & DUTIES

- The prices shall be inclusive of all taxes & levies including GST and other statutory duties as applicable. Rate of taxes should be indicated separately in the Price Bid.
- Contract Price specified in Price Bid should be based on the taxes & duties and charges prevailing at the date one day prior to the last date of Bid submission.

- Statutory deduction, wherever applicable, shall be made from invoice as per government rules. Necessary certificate will be issued for such deductions.
- Bidder submitting a bid shall produce valid statutory documents / certificates with respect to GST, Income Tax, ROC, Prof. Tax, Trade Licence, etc. All such documents / certificates shall remain valid on the last date of tender submission.
- In case of inter-state transaction, WTL will provide "Waybill". However, statutory charges, if any will be borne by the bidder.
- GST component of the invoice of the bidder may be kept on hold in case there ia any mismatch / irregularity in GST return filling on the part of the bidder.

40. DISCREPANCIES IN BID

- Discrepancy between description in words and figures, the rate which corresponds to the words quoted by the bidder shall be taken as correct.
- Discrepancy in the amount quoted by the bidder due to calculation mistake of the unit rate then the unit rate shall be regarded as firm.
- Discrepancy in totaling or carry forward in the amount quoted by the bidder shall be corrected.

41. BID DUE DATE

The tender shall be submitted not later than the due date and time specified in the Important Dates Sheet. WTL may as its discretion on giving reasonable notice by fax, or any other written communication to all prospective bidders who have been issued the bid documents, extend the bid due date, in which case all rights and obligations of the WTL and the bidders, previously subject to the bid due date, shall thereafter be subject to the new bid due date as extended.

42. LATE BID

Any proposal received after the deadline for submission of proposals may not be accepted.

43. OPENING OF BID BY WTL

Bids shall be opened and downloaded in the presence of Tender Committee and Bidder's representative (maximum 2) may attend, which is not compulsory. The bidder's representatives who are present shall sign a register evidencing their attendance and produce necessary authorization. The bidder's name, Bid modifications or withdrawals, discounts and the presence or absence of relevant Bid Security and such other details as WTL office at his/her discretion, may consider appropriate, shall be announced at the opening. WTL shall open the bid security at mentioned time.

44. CONTACTING WTL

Bidder shall not approach WTL officers beyond office hours and/or outside WTL office premises from the time of the Bid opening to the time of finalization of successful bidder. Any effort by bidder to influence WTL office in the decision on Bid evaluation, Bid comparison or finalization may result in rejection of the Bidder's offer. If the bidder wishes to bring additional information to the notice of WTL, it should be in writing.

45. WTL'S RIGHT TO REJECT ANY OR ALL BIDS

WTL reserves the right to reject any bid and to annul the bidding process and reject all bids at any time prior to award of Contract, without thereby incurring any liability to the affected bidder(s) or any obligation to inform the affected bidder(s) of the grounds for such decision.

46. BID CURRENCIES

Prices shall be quoted in Indian Rupees, inclusive of all prevailing taxes, levies, duties, cess etc.

47. PRICE

- Price should be quoted in the BOQ format only. No deviation is acceptable.
- Price quoted should be firm, inclusive of packing, forwarding, insurance and freight charges.
- Percentage/specified amount of taxes & duties should be clearly mentioned otherwise WTL reserves the right to reject such vague offer.
- Price to be quoted inclusive of supply, installation & commissioning charges.

48. CANVASSING

Canvassing or support in any form for the acceptance of any tender is strictly prohibited. Any bidder doing so will render him liable to penalties, which may include removal of this name from the register of approved Contractors.

49. NON-TRANSFERABILITY OF TENDER

This tender document is not transferable.

50. FORMATS AND SIGNING OF BID

The original and all copies of the proposals shall be neatly typed and shall be signed by an authorized signatory(ies) on behalf of the Bidder. The authorization shall be provided by written Power of Attorney accompanying the proposal. All pages of the proposal, except for un-amended printed literature, shall be initialed by the person or persons signing the proposal. The proposal shall contain no interlineations, erase or overwriting. In order to correct errors made by the Bidder, all corrections shall be done & initialed with date by the authorized signatory after striking out the original words/figures completely.

51. WITHDRAWAL OF BID

Bid cannot be withdrawn during the interval between their submission and expiry of Bid's validity period. Fresh Bid may be called from eligible bidders for any additional item(s) of work not mentioned herein, if so required.

52. INTERPRETATION OF DOCUMENTS

If any bidder should find discrepancies or omission in the specifications or other tender documents, or if he should be in doubt as to the true meaning of any part thereof, he shall make a written request to the tender inviting authority for correction/clarification or interpretation or can put in a separate sheet along with his technical bid document.

53. SPLITTING OF THE CONTRACT AND CURTAILMENT OF WORK

WTL reserve the right to split up and distribute the work among the successful bidders and to curtail any item of work in the schedule partly or fully.

54. PREPARATION OF TENDER

Tender shall be submitted in accordance with the following instructions:

a) Tenders shall be submitted in the prescribed forms. Digital signatures shall be used. Where there is conflict between the words and the figures, the words shall govern.

b) All notations must be in ink or type written. No erasing or overwriting will be permitted. Mistakes may be crossed out and corrections typed or written with ink adjacent thereto and must be initialed in ink by the person or persons signing the tender.

c) Tenders shall not contain any recapitulation of the work to be done. Alternative proposals will not be considered unless called for. No written, oral, telegraphic or telephonic proposals for modifications will be acceptable.

d) Tenders shall be uploaded as notified on or before the date and time set for the opening of tenders in the Notice Inviting Tenders.

e) Tenders subject to any conditions or stipulations imposed by the bidder are liable to be rejected.

f) Each and every page of the tender document must be signed with company seal by the bidder.

55. CLARIFICATION OF BIDS

During evaluation of the bids, the Customer/Tender Committee, at its discretion may ask the bidder for clarification of its bid. The request for the clarification and the response shall be in writing (fax/email) and no change in the substance of the bid shall seek offered or permitted.

56. COMPLIANCE WITH LAW

The contractor hereto agrees that it shall comply with all applicable union, state and local laws, ordinances, regulations and codes in performing its obligations hereunder, including the procurement

of licenses, permits certificates and payment of taxes where required.

The contractor shall establish and maintain all proper records (particularly, but without limitation, accounting records) required by any law, code/practice of corporate policy applicable to it from time to time including records and returns as applicable under labor legislation.

57. ERASURES OR ALTERNATIONS

The offers with overwriting and erasures may make the tender liable for rejection if each of such overwriting/erasures/manuscript ions is not only signed by the authorized signatory of the bidder. There should be no hand-written material, corrections or alterations in the offer. Technical details must be completely filled up. Correct technical information of the product being offered must be filled in. Filling up of the information using terms such as "OK", "accepted", "noted", "as given in brochure/manual" is not acceptable. The Customer may treat offers not adhering to these guidelines as unacceptable. The Customer may, at its discretion, waive any minor non-conformity or any minor irregularity in the offer. This shall be binding on all bidders and the Tender Committee reserves the right for such waivers.

58. FINAL INSPECTION

Final inspection will be carried by the authorized representative from WTL.

59. LOCATION DETAILS

As per Section - S.

60. SITE INSPECTION

Bidder can inspect (at their own cost) the sites if required, for which they have to take necessary permission from WTL in writing. WTL will take at least four days to organize such permission.

61. QUALITY CONTROL

- The contractor is obliged to work closely with WTL act within its authority and abide by directive issued by them on implementation activities.
- The contractor will abide by the safety measures and free WTL from all demands or responsibilities arising from accident/loss of life, the cause of which is due to their negligence. The bidder will pay all indemnities arising from such incidents and will not hold WTL responsible.
- The contractor will treat as confidential all data and information about the system, obtained in the execution of its responsibilities in strict confidence and will not reveal such information to any party without the prior written approval of WTL.
- WTL reserves the right to inspect all phases of contractor's operation to ensure conformity to the specifications. WTL shall have engineers, inspectors or other duly authorized representatives made known to the contractor, present during the progress of the work and such representatives shall have free access to the work at all times. The presence or absence of representatives of WTL does not relieve the contractor of the responsibility for quality control in all phases.
- The Court of Kolkata only will have the jurisdiction to deal with and decide any legal matters or dispute whatsoever arising out of the contract.

62. DEEMED ACCEPTANCE

Deliverables will be deemed to be fully and finally accepted by Department in the event Department has not submitted such Deliverable Review Statement to Bidder/Implementation Partner before the expiration of the 30-days review period, or when Department uses the deliverable in its business, whichever occurs earlier ("Deemed Acceptance").

63. GENERAL TERMS

a) All the pages of the bid document including documents submitted therein must be duly signed and stamped failing which the offer shall be liable to be rejected.
b) All the documents to be submitted by the bidder along with their offer should be duly authenticated by the person signing the offer and if at any point of time during procurement process or subsequently it is detected that documents submitted are

25

forged/tampered/manipulated in any way, the total responsibility lies with the bidder and WTL reserves the full right to take action as may be deemed fit including rejection of the offer and such case is to be kept recorded for any future dealing with them.

c) No Technical/Commercial clarification will be entertained after opening of the tender.

d) Overwriting and erasures may make the tender liable for rejection if each of such overwriting/erasures/manuscription is not only signed by the authorized signatory of the bidder. All overwriting should be separately written and signed by the authorized signatory of the bidder.

e) Quantity mentioned in the tender document is indicative only and orders shall be placed subject to actual requirement. WTL reserve the right to increase or decrease the quantity specified in the tender.

f) WTL reserve the right to reject or accept or withdraw the tender in full or part as the case may be without assigning the reasons thereof. No dispute of any kind can be raised the right of buyer in any court of law or elsewhere.

g) WTL reserve the right to ask for clarification in the bid documents submitted by the bidder. Documents may be taken if decided by the committee.

h) No dispute by the bidders in regard to Technical/Commercial points will be entertained by WTL and decision taken by the Tender Committee will be final.

i) Discrepancy in the amount quoted by the bidder due to calculation mistake, the unit rate shall be regarded as firm and the totaling or carry in the amount quoted by the bidder shall be corrected accordingly.

j) The price offers shall remain firm within the currency of contract and no escalation of price will be allowed.

k) The acceptance of the tender will rest with the accepting authority who is not bound to accept the lowest or any tender and reserves the right to reject in part or in full any or all tender(s) received and to split up the work among participants without assigning any reason thereof.

l) The customer/WTL at its discretion may extend the deadline for the submission of Bids.

m) The Court of Kolkata only will have the jurisdiction to deal with and decide any legal matters or dispute whatsoever arising out of the contract.

WEBEL TECHNOLOGY LIMITED

SECTION – E

TECHNO COMMERCIAL EVALUATION & AWARDING OF CONTRACT

1. EVALUATION PROCEDURE

- The Eligibility Criteria (Section - C) will be evaluated by Tender Committee and those qualify will be considered for further evaluation.
- The Tender Committee shall verify the Technical Specification (Technical Specification with Compliance Statement, Section – I) Deviation in specification shall not be allowed. Bidder qualified in Technical Specification shall be considered for further evaluation.
- The Tender Committee would evaluate the Techno Commercial Evaluation. In order to facilitate the evaluation, the marking scheme presented is an indication of the relative importance of the evaluation. Bidders securing a minimum of 70% marks in the Techno Commercial Evaluation for qualifying technical evaluation.
- Bidders after qualifying in Techno Commercial Evaluation will only be considers for Financial Bid Evaluation.

2. EVALUATION CRITERIA

Techno Commercial Evaluation

The evaluation methodology would take into consideration both the Techno Commercial responsiveness as well as the financial response. During the evaluation process, the evaluation committee will assign each desirable/preferred feature a whole number score for the Techno Commercial Bid as defined in the table below:

Description	Max Score	Details	Break Up
A. Organization Capability			
A1. Organizational Profile			
Existing Support Infrastructure across the state (Own/ASP) (Supporting documents with location details/Address/ phone no. to be submitted). Presence of personnel in a customer site would not be considered as Infrastructure presence	15	Presence in Kolkata only	10
		Presence in Kolkata and Siliguri / North Bengal	12
		Presence in Kolkata, Siliguri / North Bengal and 5 districts	15
A2. **Financial Profile**			
Average turnover for three financial years (FY – 2014-15, 2015-16 & 2016-17)	15	Up to 250 Crores	10
		More than 250 up to 500 Crores	12
		More than 500 crores	15
Experience in executing IT projects (experience in providing H/W, N/W support and facility management services) Total value of networking / infrastructure projects in India Completed / Running /Awarded Projects as on 31st December 2017 - each project of value > = 15cr	10	2 projects	5
		3 projects	7
		4 projects	8
		5 projects More than 5 projects	9
		More than 5 projects	10
B. Technical Capability			
B1. Project Management			

WEBEL TECHNOLOGY LIMITED

Technical Capability in executing & managing projects integrating various technologies (where Supply, Commissioning of Networking Solutions, including operation and Maintenance is involved). List/Details of at Least Five Projects to be submitted. Number of Project in India	20	Project#1	4
		Project#2	8
		Project#3	12
		Project#4	16
		Project#5	20

B2. Technical Solution

Solution offered conforming to this RFP. Solution documents to be submitted	15	Network solution Plan	8
		Hardware Maintenance Plan	4
		Server Admin / App support	3

B3. Experience in SWAN Projects

| Number of Projects in India where the Bidder having experience of State Wide Area Network project at any of the State / UT governments | 5 | Experience in executing 1 SWAN Project | 3 |
| | | Experience in executing 2 or more SWAN Project | 5 |

B4. Experience in executing large WAN Nodes

Total No. of WAN nodes handled in a single work order - Completed / Running / Awarded Projects as on 31st December 2017	10	Network having up to 100 WAN nodes	6
		Network having more than 100 and up to 200 WAN nodes	8
		Network having more than 200 WAN nodes	10

B5. Technical Manpower

| List of technical resources proposed for this project (with qualification and experience). Details given below. | 10 | Project Manager (Each CV 2 points x 2 CVs) | 4 |
| | | Technical Resource (Each CV 0.5 points x 12 CVs for Technical Resource personnel) | 6 |

Sr.	Manpower	Details
1.	Project Manager	Qualification: BE/B. Tech with Certification in Network / Server Management with Project lead experience in 2 projects of similar nature and size. Experience: 8+ years. CV should be maximum 3 pages. Experience in working for projects for Government clients.
2.	Technical Resource	Technical resources to be deployed in the project Qualification BE/B. Tech/Diploma with certification in Network / Server Management with 5 + years experience. CV should be maximum of 3 pages. Relevant experience in managing all aspects of IT / Network infrastructure / Network Security is required.

All related documents to be submitted.

1. **FINAL EVALUATION**

    Financial bid of the qualified bidders shall be downloaded on the scheduled date & time in the presence of the Tender Committee. Final evaluation will be done among the short listed bidders in accordance with Quality & Cost and will involve both Techno Commercial & Financial Evaluation with the following weight-age.

| A | Techno Commercial Evaluation | 40% |
| B | Financial Evaluation | 60% |

    Commercial Bid Score (BS) will be calculated for each responsive bid using the following formula which permits a comprehensive assessment of the bid price and techno commercial merits of each bid.

28

WTL/PAR /STR/17-18/035

$$BS = \frac{TC}{TTC} \times 0.40 + \frac{LBP}{BP} \times 0.60$$

Where

BS	-	Evaluated Bid Score
BP	-	Amount of Bid Price of bidder
LBP	-	Lowest Amount of Bid Price among bidders
TC	-	Techno Commercial Score awarded to bidder
TTC	-	Total Techno Commercial Score (100 marks in this case)

The bid with the highest Evaluated Bid Score (BS) among the responsive bids shall be most responsive bid.

3. **AWARDING OF CONTRACT**

An affirmative Post Qualification determination will be prerequisite for award of the contract to the most overall responsive bidder. A negative determination will result in rejection of bidder's bid, in which event the WTL will proceed to the next lowest evaluated bidder to make a similar determination of that bidder's capability to perform satisfactorily. WTL will award the contract to the successful bidder whose bid has been determined to be substantially responsive after final negotiation may held with the most responsive bidder, if required. This is a turnkey job in a nature, so bidder(s) to quote all the items mentioned in the tender document, which can ensure single point contact / sole responsibility of the bidder(s) towards project execution. The successful bidder (s) will have to give security deposit in the form of Performance Bank Guarantee.

4. **POST QUALIFICATION**

The determination will evaluate the Bidder's financial, technical, design, integration, customization, production, management and support capabilities and will be based on an examination of the documentary evidence of the Bidder's qualification, as well as other information WTL deems necessary and appropriate. This determination may include visits or interviews with the Bidder's client's reference in its bid, site inspection, and any other measures. At the time of post-qualification, Department of Par& e-Governance may also carry out tests to determine that the performance or functionality of the Information System offered meets those stated in the detailed Technical Specification.

WEBEL TECHNOLOGY LIMITED

SECTION – F

BID FORM

(Bidders are requested to furnish the Bid Form in the Format given in this section, filling the entire Blank and to be submitted on Letter Head in original)

To
Webel Technology Limited
Plot – 5, Block – BP, Sector - V,
Salt Lake City,
Kolkata – 700091.

Sub: WBSWAN Technology Refresh.

Dear Sir,

1. We the undersigned bidder/(s), having read and examined in details the specifications and other documents of the subject tender no. WTL/PAR/STR/17-18/035 dated 15.01.2018, do hereby propose to execute the job as per specification as set forth in your Bid documents.

2. The prices of all items stated in the bid are firm during the entire period of job irrespective of date of completion and not subject to any price adjusted as per in line with the bidding documents. All prices and other terms & conditions of this proposal are valid for a period of 180 (one hundred eighty) days from the date of opening of bid. We further declare that prices stated in our proposal are in accordance with your bidding.

3. We confirm that our bid prices include all other taxes and duties and levies applicable on bought out components, materials, equipments and other items and confirm that any such taxes, duties and levies additionally payable shall be to our account.

4. Earnest Money Deposit: We have enclosed EMD in the form of Demand draft for a sum of Rs. 50,00,000/- (DD no. _____ dated _____ drawn on _____).

5. We declare that items shall be executed strictly in accordance with the specifications and documents irrespective of whatever has been stated to the contrary anywhere else in our proposal. Further, we agree that additional conditions, deviations, if any, found in the proposal documents other than those stated in our deviation schedule, save that pertaining to any rebates offered shall not be given effect to.

6. If this proposal is accepted by you, we agree to provide services and complete the entire work, in accordance with schedule indicated in the proposal. We fully understand that the work completion schedule stipulated in the proposal is the essence of the job, if awarded.

7. We further agree that if our proposal is accepted, we shall provide a Performance Bank Guarantee of the value equivalent to ten percent (10%) of the Order value as stipulated in Financial Bid (BOQ).

8. We agree that WTL reserves the right to accept in full/part or reject any or all the bids received or split order within successful bidders without any explanation to bidders and his decision on the subject will be final and binding on Bidder.

Dated, this …………………..day of ……………………2018

Thanking you, we remain,

WEBEL TECHNOLOGY LIMITED

Yours faithfully

……………………………………………
Signature

……………………………………………..
Name in full

……………………………………………..
Designation

Signature & Authorized Verified by

……………………………………………
Signature

……………………………………………
Name in full

……………………………………………
Designation

……………………………………………
Company Stamp

WTL/PAR /STR/17-18/035

WEBEL TECHNOLOGY LIMITED

SECTION – G

GUIDANCE FOR E-TENDERING

Instructions / Guidelines for electronic submission of the tenders have been annexed for assisting the Bidders to participate in e-Tendering.

1. **Registration of Bidder:**
   Any Bidder willing to take part in the process of e-Tendering will have to be enrolled & registered with the Government e-Procurement System through logging on to **https://wbtenders.gov.in.** The Bidder is to click on the link for e-Tendering site as given on the web portal.

2. **Digital Signature Certificate (DSC):**
   Each Bidder is required to obtain a Class-II or Class-III Digital Signature Certificate (DSC) for submission of tenders from the approved service provider of the National Informatics Centre (NIC) on payment of requisite amount. Details are available at the Web Site stated above. DSC is given as a USB e-Token.

3. The Bidder can search & download N.I.T. & BOQ electronically from computer once he logs on to the website mentioned above using the Digital Signature Certificate. This is the only mode of collection of Tender Documents.

4. **Participation in more than one work:**
   A prospective bidder shall be allowed to participate in the job either in the capacity of individual or as a partner of a firm. If, found to be applied severally in a single job all the applications will be rejected.

5. **Submission of Tenders:**
   Tenders are to be submitted through online to the website stated above in two folders at a time, one in Techno Commercial Proposal & the other is Financial Proposal before the prescribed date & time using the Digital Signature Certificate (DSC). The documents are to be uploaded virus scanned copy duly Digitally Signed. The documents will get encrypted (transformed into non readable formats)

The proposal should contain scanned copies of the following in two covers (folders).

Techno Commercial Cover:

Technical Document1 (scanned & join in pdf format then upload)
1. Copy of Demand Draft of Earnest Money Deposit (EMD)
2. Copy of Demand Draft of Tender Fee

Technical Document2 (scanned & join in pdf format then upload)
1. N I T Declaration duly stamped & signed in bidder's letter head, Section – R
2. Bid Form as per format (Section – F)

Technical Compliance (scanned & join in pdf format then upload)
1. Technical Specification With Compliance Statement (Section – I)
2. Manufacturer Authorisation Form (Section – P)

Financial Cover:
BOQ will be downloaded and same will be uploaded with quoted rates. While uploading BOQ file name shall remain unchanged. Absence of this document shall lead to summary rejection of the bid.

NON-STATUTORY COVER (MY SPACE) CONTAIN FOLLOWING DOCUMENT:
(In each folder, scanned coy will be uploaded with single file having multiple pages)

WEBEL TECHNOLOGY LIMITED

Sl. No.	Category Name	Sub Category Name	Sub Category Description
A	CERTIFICATES	A1. CERTIFICATES	- GST Registration Number - PAN - Document as per Clause no. 2 of Section – C
B	COMPANY DETAILS	B1. COMPANY DETAILS 1	- Document as per Clause – 1 of Section – C - Declaration as per Clause no.13 of Section – C
		B2. COMPANY DETAILS 2	- Company Profile (Not more than 3 pages) - Documents as per Eligibility Criteria
C	CREDENTIAL	CREDENTIAL 1	Order copies as per Eligibility Criteria
		CREDENTIAL 2	- Product brochure - All documents related to pointing - Other documents, if any
D	DECLARATION	DECLARATION 1	- List of Clients as per format (Section – O) - Financial Capability of Bidder as per format (Section – K)
		DECLARATION 2	Document as per Clause no. 11 of Section – C, Format Section – N
		DECLARATION 3	Bidder's Details as per format (Section – L)
		DECLARATION 4	Details of Order as per format (Section – J)
		DECLARATION 5	Declaration as per Clause no.5 of Section – C
F	FINANCIAL INFO	P/L & BALANCE SHEET 2014-2015	P/L & BALANCE SHEET 2014-2015
		P/L & BALANCE SHEET 2015-2016	P/L & BALANCE SHEET 2015-2016
		P/L & BALANCE SHEET 2016-2017	P/L & BALANCE SHEET 2016-2017

The hard copy of the total set of documents uploaded in e-Tender site except BOQ to be submitted in sealed envelope to Manager (Purchase), Webel Technology Ltd. before opening of Technical Bid. The envelope superscripted with words "Hard copy of document uploaded against Tender no. WTL/PAR/STR/17-18/035 except BOQ".

WTL/PAR /STR/17-18/035

WEBEL TECHNOLOGY LIMITED

SECTION – H

BILL OF MATERIAL

Sl. No.	Description of Items	Total Qty	Unit
A	**Upgradation at SHQ (State Head Quarter)**		
1.0	Line Card for Existing SHQ Core Router ASR 1004 with 2-port 10GE and 20-port GE	1	No.
1.1	8 x5 x NBD support for 3 years	1	No.
2.0	Upgradation of existing Websense Security Appliances Hardware with 8 x 5 x NBD support for 3 years	1	No.
3.0	Upgradation of existing CA Network Management System with 8 x 5 x NBD support for 3 years	1	No.
4.0	Upgradation of Existing IPBX (Cisco CUCM BE7M) at SHQ with additional 129 software licenses	1	No.
B	**Upgradation/ Replacement of Existing System at SHQ**		
3.0	Layer 3 switch with 48xGE Non-PoE and 4x10G ports	2	No.
3.1	8 x5 x NBD support for 3 years	2	No.
4.0	Layer 2 switch - 24xGE PoE	1	No.
4.1	8 x5 x NBD support for 3 years	1	No.
5.0	Upgradation of MCU - Multi-point Control Unit for Video Conference System	1	No.
5.1	8 x5 x NBD support for 3 years	1	No.
6.0	Servers for NMS, DNS, Proxy, Antivirus, etc and storage of various logs, reports, VC sessions, etc with 8 x 5 x MBD support for 3 years	4	No.
7.0	UPS monitoring software with NBD support and patch updates for 3 years	1	No.
8.0	IP Phone (100 nos)	100	No.
8.1	8 x5 x NBD support for 3 years	100	No.
9.0	Firewall	2	No.
9.1	8 x5 x NBD support for 3 years	2	No.
10.0	Internet Gateway Router	1	No.
10.1	8 x5 x NBD support for 3 years	1	No.
11.0	AAA Server	1	No.
11.1	8 x5 x NBD support for 3 years	1	No.
C	**Upgradation at DHQ (District Head Quarter)**		
1.0	DHQ Router	19	No.
1.1	8 x5 x NBD support for 3 years	19	No.
2.0	DHQ switch	19	No.
2.1	8 x5 x NBD support for 3 years	19	No.
3.0	DHQ VC end points	5	No.
3.1	8 x5 x NBD support for 3 years	5	No.
4.0	DHQ UPS systems with input and output cables – 6 KVA (in 1+1 redundant mode)	38	No.
4.1	8 x5 x NBD support for 3 years	38	No.
4.2	Battery for DHQ UPS systems with 2 years warranty	760	No.
4.3	TVSS for UPS	38	No.
4.4	Interlink cable for UPS	38	No.
4.5	Buyback of old DHQ UPS with batteries and accessories	38	Set
5.0	Multimedia PC at DHQs with onsite comprehensive warranty for 3 years	19	No.
6.0	Minimum 50" LED Monitor/TV (HD) with 3 years warranty	10	No.
D	**Upgradation at SDHQ (Sub-Division Head Quarter)**		

WTL/PAR /STR/17-18/035

1.0	SDHQ Router	65	No.
1.1	8 x5 x NBD support for 3 years	65	No.
2.0	SDHQ switch	65	No.
2.1	8 x5 x NBD support for 3 years	65	No.
3.0	UPS (2 KVA True On-line) with input and output cables	65	No.
3.1	8 x5 x NBD support for 3 years	65	No.
3.2	Battery for UPS with 2 years warranty	390	No.
3.3	Interlink cable for UPS	65	No.
3.4	TVSS for UPS	65	No.
3.5	Buyback of old SDHQ UPS with batteries & accessories	65	Set
4.0	Multimedia PC with onsite comprehensive warranty for 3 years	65	No.
E	**Upgradation at BHQ (Block Head Quarter)**		
1.0	BHQ Router	341	No.
1.1	8 x5 x NBD support for 3 years	341	No.
2.0	BHQ switch	341	No.
2.1	8 x5 x NBD support for 3 years	341	No.
3.0	UPS (2 KVA True On-line) with input and output cables	341	No.
3.1	8 x5 x NBD support for 3 years	341	No.
3.2	Battery for UPS with 2 years warranty	2046	No.
3.3	Interlink cable for UPS	341	No.
3.4	TVSS for UPS	341	No.
3.5	Buyback of old BHQ UPS with batteries & accessories	341	Set
4.0	Multimedia PC with with onsite comprehensive warranty for 3 years	341	No.

Bill of quantity may change at the time of ordering/execution of work. Final bill will be raised on actual consumption of all materials. Cable laying charge will be on basis of at actual lying of cables. Detailed Technical Specifications are given in Section – I

WEBEL TECHNOLOGY LIMITED

SECTION - I

TECHNICAL SPECIFICATION WITH COMPLIANCE STATEMENT

(Tender No. WTL/PAR/STR/17-18/035)

- Bidder should submit all relevant data sheet/brochure of all quoted items and it should also be available in respective OEM's official website.
- Bidder should indicate items mentioned in the OEM data sheet / brochure by marking the serial no. as mentioned in minimum specification in this RFP.

1. Minimum Specification for upgradation of EXISTING SHQ Core Router

Qty.	1 nos.
Make	Cisco
Model	Cisco ASR 1004
Part No.	ASR1000-2T+20X1GE=

Minimum Specification		Line item Qty.	Specification (Quoted / Applicable – by the bidder)	Complied (Yes / No)
Part No.	Description			
ASR1000-2T+20X1GE=	ASR1000 2-port 10GE, 20-port GE Line Card	1		
CON-SNT-ASR1X1GE	SNTC-8X5XNBD ASR1000 2-port 10GE, for 36 months	1		
XFP-10G-MM-SR	10GBASE-SR XFP Module	2		
CON-SNT-XFP10GMM	SNTC-8X5XNBD 10GBASE-SR XFP Module for 36 months	2		
GLC-TE	1000BASE-T SFP transceiver module for Category 5 copper wire	10		
GLC-SX-MMD	1000BASE-SX SFP transceiver module, MMF, 850nm, DOM	5		

2. Upgradation of Existing Forcepoint/Websense Web Security Solution

Upgradation of existing Websense appliance (V10000 G3 version 8.2.0) **to HA V10000 Appliance for HA= 1 Qty**

3. Minimum Specification of Network Management System at SHQ

Qty.	01 (One) Nos.
Make	CA
Model	
Part No.	

Minimum Specification		Line item Qty.	Specification (Quoted / Applicable – by the bidder)	Complied (Yes / No)
Item	Description			
CA Spectrum Device Based Suite with 3 years maintenance	Proactive Network Management - Realtime Network Management with Dashboard, Topology View,	Perpetual License for 400		

support from OEM	Configuration Management, Alarm Management, Root Cause Analysis, Cross domain reporting with Performance Management Tool. With Geo Map integration capability. Single dashboard capability for both Virtual and Physical Network environment management.	Devices		
CA Unified Infrastructure Management Network Advanced Pack- On Prem Partner with 3 years maintenance support from OEM	Performance Management Tool for Historical Reporting, Trend Analysis, On demand Customized reporting from central server, Self-Monitoring capacity and Integration capability with Traffic Management Tool.	Perpetual License for 400 Devices		
CA Network Flow Analysis with 3 years maintenance support from OEM	Traffic Management - Network Traffic Analysis, Anomaly detection in network behavior, Flow forensic, Realtime Protocol features. Realtime Reporting.	Perpetual License for 400 Devices		
CA Service Management SDM Package with 3 years maintenance support from OEM	Help Desk Software - Help Desk Management with Incident Management, Problem Management, Knowledge Management, Change & Configuration Management , End User Desktop Support & Service Catalog .	Perpetual License for 30 Concurre nt Users		

Network Management
General Requirement
- All the proposed modules should be from the single OEM and must seamlessly integrate without any customization.
- Proposed fault management solutions should provide a secure web client for Alarm Management and Topology view over http for easy access.
- Proposed NMS software that should be seamlessly integrate with the existing setup of NMS/EMS software running in WBSWAN. Most important aspect which should be taken care while designing the WBSWAN EMS is about seamless integration with WBSDC EMS as per the requirement of department .

Network Fault Management
- The proposed Network Fault Management solution should be a single platform solution for proactive fault isolation, root cause analysis, change management, service aware management, IP services management, policy management, and reporting for network devices across multiple network technologies.
- Proposed Fault Management console must provide a map view along with built-in Integration with GIS Systems (like Google Maps) from a single central console.
- Proposed fault management must support built-in fault-tolerance or high availability without requiring any additional third-party software to reduce the cost and time required for deployment.
- Proposed NMS solution must be a native 64-bit application and thereby able to fully utilize the hardware resources (like CPU / RAM address space etc.) and create a highly scalable management platform that can provision for up to many thousands of network device management from a single optimized hardware for the core application. The NMS software must be a true 64-bit application and thereby maximize the usage of available server resources and deliver good performance.
- Proposed solution must have the capability of managing network elements in overlapping (or private) IP domains (NAT environments).
- The proposed solution must support Network segmentation by supporting IPSEC / GRE Tunnels as well MPLS Layer 3 VPNs (e.g. VRF) & VLANS.
- The system should support maps grouped by network topology, geographic locations of the equipment's and user group/departments. These should help in understanding physical Network, virtual Network services and the relationships between them.
- GIS View – Google maps integration

- Proposed NMS must be able to identify location in google maps based on the network location attribute from SNMP MIB of core device and display the device along with its health and availability status in a map to give a visual indication of the overall health of the network as well as critical network devices / interfaces.
- Proposed solution must be able to discover, model and create topology map of vPC enabled devices and its vPC channels along with their individual physical port connections.
- Proposed solution must provide intelligent alarms, RCA and Impact Analysis feature for monitoring vPC domains.
- Proposed solution should provide VSS device discovery & Modelling capabilities. Discovered devices should be available and easily accessible in the console.
- The proposed solution must be fully owned and developed by the OEM and must provide out of the box root cause analysis with multiple built-in root-cause analysis algorithms for instantly isolating root cause of network outage.
- The system must be able to 'filter-out' symptom alarms and deduce the root cause of failure in the infrastructure automatically
- The proposed fault management must be able to clearly identify configuration changes as root cause of network problems
- The proposed solution must have an in-built capability to carry out configuration management without the use of any external software to reduce integration efforts and increase ease of deployment.
- The system should support secure device configuration capture and upload and thereby detect inconsistent "running", "startup" or "reference" configurations and alert the administrators.
- The proposed fault management solution must able to perform "load & merge" configuration changes to multiple network devices
- The proposed system should be able to monitor compliance & enforce change control policies within the diverse infrastructure by providing data & tools to run compliance reports, track & remediate violations, and view history of changes.
- Root cause analysis of infrastructure alarms must be applied to the managed Business Services in determining service outages.
- SLA violation alarms must be generated to notify whenever an agreement is violated or is in danger of being violated.
- The Proposed fault management solution must integrate with the Performance management solution out of the box and expand the fault management capabilities of the infrastructure with performance information and performance / threshold violation alarms from performance management solution to provide the following benefits:
  - o Proposed solution must provide holistic view of availability of host servers on network and their performance data for fault management in a single pane of application.
  - o Proposed solution should provide end to end root cause and impact analysis across network elements, extending fault management core capabilities to other infrastructure domains.
  - o Proposed solution should supports Advance condition correlation between fault & performance management module.
- The system should be able to provide Dashboard view to show the types of inventories in your virtual network, and their growth over time.
- The proposed fault management must be able to clearly identify configuration changes as root cause of network problems
- The proposed solution must have an in-built capability to carry out configuration management without the use of any external software to reduce integration efforts and increase ease of deployment.
- The system should support secure device configuration capture and upload and thereby detect inconsistent "running", "startup" or "reference" configurations and alert the administrators.
- The proposed fault management solution must able to perform "load & merge" configuration changes to multiple network devices
- The proposed system should be able to monitor compliance & enforce change control policies within the diverse infrastructure by providing data & tools to run compliance reports, track & remediate violations, and view history of changes.
- Root cause analysis of infrastructure alarms must be applied to the managed Business Services in determining service outages.
- SLA violation alarms must be generated to notify whenever an agreement is violated or is in danger of being violated.
- The Proposed fault management solution must integrate with the Performance management solution out of the box and expand the fault management capabilities of the infrastructure with performance information and performance / threshold violation alarms from performance management solution to provide the following benefits:

- o Proposed solution should provide end to end root cause and impact analysis across network and server elements, extending fault management core capabilities to other infrastructure domains.
- o Proposed solution should support Advance condition correlation between fault & performance management module with bi-directional integration.
- The system must support seamless bi-directional integration to helpdesk or trouble ticketing system
- The proposed infrastructure fault management system should integrate with the helpdesk system by updating the Asset with CI information to support viewing history or open issues in helpdesk on the managed asset and associate an SLA to the ticket in the helpdesk.
- Proposed NMS/EMS solution should be able to integrate with existing NMS/EMS solution running for WBSWAN.
- The system should be able to provide OOTB insight on the relationship between physical resources and virtual entities for SDN environments. platform.

The system should be able to provide Dashboard view to show the types of inventories in your virtual network, and their growth over time.

Network Performance Monitoring

- Proposed performance management solution should havean inbuilt mechanism to collects management server data from the database. The data includes: performance management solution environment information such as internal details, inventory details, and other data that is helpful for troubleshooting the management server.
- The Solution should provide capability to monitor any device based on SNMP v1, v2c & 3
- The Solution must be capable of monitoring the availability, health, and performance of core networking devices including but not limited to CPU, memory, temperature, interface bandwidth utilization.
- The Solution should have the ability to issues pings to check on availability of ports, devices.
- The Port Check for IP Services monitoring should also provide mechanism to define new services and ability to send custom commands during port check mechanism.
- The Solution should have the ability to receive SNMP traps and syslog.
- The Solution should automatically collect and store historical data so users can view and understand network performance trends.
- The solution should be capable of monitoring network delay/latency and delay variation
- The solution should be capable of monitoring packet loss, Packet QOS, Packet Errors on one or more ports
- The solution should support auto-discovery of network devices
- The solution should have the ability to schedule regular rediscovery of subnets.
- The solution should provide the ability to visually represent LAN/WAN links (including VPN/IPSEC) with displays of related real-time performance data including utilizations.
- The system should provide discovery of heterogeneous physical network devices like Layer-2 & Layer-3 switches, Routers and other IP devices and do mapping of LAN & WAN connectivity with granular visibility up to individual ports level.
- The solution should provide capability to mask the default port speed for accurate % port utilization reporting
- The solution should provide capability to add devices from word or excel file by drag and drop functionality and auto configure based on pre-defined settings.
- The solution should allow easy configuration of polling frequency.
- The solution should provide capability to perform custom OID based monitoring of devices.
- The system should have self-certification capabilities built into the product so that it can easily add support for new devices for traps and automatically generate alarms
- The solution should provide use of expressions consisting of operators, variables and functions which can be used for viewing.

Dashboards & Reporting - Ability to monitor millions of metrics
- Proposed fault & Performance management solutions should provide OOTB customized cross domain Graphical Dashboards and reporting options.

- Proposed solutions should be able to generate network performance reports using out-of-the-box templates that can be customized with a few mouse clicks; automatic report creation and distribution. Report should have capability to export in pdf, PNG, Excel and different format output.

- The Unified Dashboards should support various technologies (ex: for VMware, AWS, and Windows resources)

- Proposed solutions should provide Trend and Group Trend Reports - Trend and Group Trend reports display time-series data for ether: a single metric and a set of up to 10 devices or interfaces within a group.

- Proposed solutions should provide Health index report – rapid identification of under-performing IT assets with historical trending to identify aging perform of a specific component or group of assets

- Proposed solutions should provide At a Glance Reports – Time series data for a network component or device

- Proposed solutions should provide Top N Reports – Tabular report that can be filtered by multiple variables to pinpoint under-performing components

Network Traffic Monitoring

- Proposed solutions should provide Network Utilization and bandwidth analysis with the integration with traffic management and performance management users.

- The solution must provide the following Flow-based metrics:
  - Rate
  - Utilization
  - Byte Count
  - Flow Count
  - IP hosts with automatic DNS resolution
  - IP conversation pairs with automatic DNS resolution
  - Router/interface with automatic SNMP name resolution
  - Protocol breakdown by host, link, ToS or conversation.
  - Utilization by bit pattern matching of the TCP ToS field.
  - AS number
  - BGP next hop address
  - IPv6 addresses

- The proposed solution must be able to monitor and report on a minimum of 15000 unique protocols per day and display utilization data for each protocol individually. This capability must be available for each monitored interface uniquely.

- The proposed solution must keep and report on a minimum 25000 unique hosts per day for each monitored interface.

- The proposed solution must keep and report on a minimum 25000 unique conversations per day for each monitored interface.

- The system must support the ability to report on traffic based on the IP ToS field using a bit pattern matching method that will allow reporting on any variation of usage within this 8 bit field including, DSCP and IP Precedence. The system must maintain this custom ToS based information for each interface for at least 12 months at a minimum 15 minute granularity.

- The system must support the ability to specify which hosts, conversations, IP ports, custom ToS matches and interfaces are included or excluded from the web based report.

- The system must allow date range selection for the reporting period. The system must also allow the defined custom reports to be saved indefinitely for future use. All reports should be generated and displayed directly by the system from a common interface.

- The system must be able to restrict views for defined users to specific routers, interfaces, and reports.

- The user must be able to generate reports from the long term database based on specific thresholds defined by the user where the threshold can be compared to rate, utilization or volume of every monitored interface as a filter for inclusion in the report.

- The system must support the ability to create reports that allow the user to search all IP traffic over a specified historical period, for a variety of conditions. The system must have the ability to search all IP traffic without loss or exclusion of any traffic. The system must support search within this period for the following at a minimum;
  - Search for any clients or servers that are experiencing more than a specified number of TCP resets per hour within a specified reporting period.
  - Search for any IPv4 or IPv6 conversation across the entire network.
  - Search for any protocol in use by a specific host or list of hosts.
  - Search for any protocol in use on a specific interface or list of interfaces.
  - Search for every host that is accessing a specific host or list of hosts.

- The proposed system must be capable of automatically detecting anomalous behavior such as virus attacks or unauthorized application behavior. The system should analyze all Flow traffic and alert via SNMP trap and syslog of any suspicious activity on the network.
- Flow collection systems must support a minimum of 5 million flows per minute and be capable of storing gathered information in a common database where all long term reporting information is held.
- The proposed system must be capable of providing the following detailed analysis:
  - Top utilized links (inbound and outbound) based on utilization of every link being monitored by every collection device.
  - Top protocols by volume based on utilization of every link being monitored by every collection device.
  - Top host by volume based on utilization of every link being monitored by every collection device.
- The solution must automatically populate a list of interfaces exporting Flow traffic to any of its collection devices without user intervention or individual configuration of the reporting interfaces on the system. The system must also support manual edit of the automatically polled information.
- The system must provide the ability to group interfaces into functional groups based on any user criteria. The grouping function must allow users to create group names and add interfaces into that grouping for reporting purposes.
- The system must support interface specific report generation for every monitored interface in the network. The network interface selection must also provide a search function that allows the user to search for interfaces based on text based pattern matching of the device name, interface name, description and active status of all interfaces in the list.
- The proposed system must spot potential bottlenecks with color-coded indicators for interfaces that breach defined thresholds and durations
- The proposed system must enable planning of future capacity needs and customize bandwidth projection calculations by utilization, protocol and Type of Service (ToS)
- The proposed traffic monitoring system must help solving performance problems faster using real-time reports and alarms for every interface on the network for the past 30 days with one-minute granularity
- The proposed system must provide details of applications, hosts, and conversations consuming WAN bandwidth to isolate and resolve problems
- The proposed system must use host-based Anomaly Detection capabilities for early warning of malware, tunneling, rogue user behavior, host mis-configuration and other performance threats
- The proposed traffic monitoring system must provide real-time reports and alarms at one-minute granularity for every interface on the network
- The proposed system must provide eight-hour, daily, weekly, monthly, yearly, or customizable reporting time periods
- The proposed traffic monitoring system must comprise of baseline views and anomaly detection capabilities to identify abnormal traffic and analyze trends in applications, hosts, and conversations per QoS policy
- The proposed traffic monitoring system must be able to track 100% of all flow traffic on the network and identify malicious behavior with all IP conversations

HELP DESK

General Requirement of Help Desk system

1   The proposed solution shall provide a web based service support system to automate incident, problem, change, knowledge management, interactive support, self-service and advanced root cause analysis

2   The proposed solution should have achieved PinkVERIFY 2011 certification on at least 15 available ITIL processes (a documentary proof of the same should be provided at the time of bidding).

3   The proposed solution shall support request management, incident, problem management, configuration management and change order management.

4   The proposed solution shall provide an identity management system that allows user/role management and integration with authentication systems such as LDAP/AD.

5   The proposed solution shall provide ready content for foundation processes, procedures and work instructions for Request, Incident, Knowledge, Problem, Change and Configuration Management.

6   The proposed solution shall support multi-tenancy to enable different tenants (departments/customers) to use the same physical instance of the service desk.

7   The proposed solution shall provide a distributed and scalable architecture that caters to growth in number of analysts, end-users and call volumes.

8   The proposed solution shall provide Workflow tool or engine to help in modelling and automating ITSM workflows in order to meet complex process or workflow needs. The Workflow tool or engine shall allow building processes/workflows that allow decision-based branching, parallel processing, custom input and approval forms, and integration with home-grown and third-party systems via a variety of integration tools.

9   The solution should also offer Service Catalog as part of the license for request management.

10   The proposed solution 's analyst interface must enables an analyst to view the workload forecast for the day, based on the tickets assigned to the analyst, analyst groups, etc.. And should allow to prioritize work and make decisions to list the activities to be completed.

11   The proposed solution shall provide pre-defined work streams for logical grouping of tickets based on the specific search criteria. For example, "My Queue" work stream provides quick access to the active tickets assigned to the analyst or a "Watchlist" work stream for showing active tickets the analyst is following to monitor the progress.

12   The proposed solution should allow analysts to create custom work streams from the analyst Interface & can hide, show, edit, or delete these custom work streams.

13   The proposed solution should allow analysts to prioritize work by leveraging the composite representation of various attributes and conditions that define the criticality of a ticket.

14   The proposed solution must provide multi-faceted search so as to have quick access to an existing record and can take action that is based on your search. For example, It can search for a user and can create a ticket on their behalf. Multi-faceted search provides relevant suggestions as one types and displays the first results that match your query, for each facet. It can search for users, assets, tickets (incidents and requests), and knowledge documents.

15   The proposed solution must include timeline feature for the representation of activities on a ticket displayed in a chronological order. Every activity on the ticket is captured on the timeline along with the contact information and the time stamp. A unique icon must represent each activity type.

16   The proposed solution should provide widgets like Suggested Solution: displays the list of published knowledge base articles and closed incidents and requests.

17   The proposed solution should provide widgets like Suggest Experts: displays the list of contacts that can assist the analyst in resolving the ticket quickly.

Incident/Problem Management:-

18   The proposed solution shall provide end-users the flexibility of logging, viewing, updating and closing service requests and incidents using a web-based interface.

19   The proposed solution shall provide administrators (service desk analysts) the ability to use a fully-functional web-interface and should provide power-user tips for frequently used functions.

20   The proposed helpdesk solution must have the ability to track work history of calls to facilitate troubleshooting.

21   The proposed solution shall provide the facility to register incidents via e-mail.

22   The proposed solution shall provide appropriate standards based integration mechanisms (such as CLI/Web-services) that allow infrastructure management solutions to automatically register incidents.

23   The proposed solution shall provide classification to differentiate the incident via multiple levels/tiers of categorization, priority levels, severity levels and impact levels.

24   The proposed solution shall provide the ability to associate each incident with multiple activity logs entries via manual update or automated updates from other security or infrastructure management tools.

25   The proposed solution shall provide the flexibility of automated incident assignment based on metrics such as analyst workload, category and location.

26   The proposed solution shall support definitions of escalation policies for multiple escalation levels and notification to different personnel via window GUI/console with no or minimum programming.

27   The proposed solution shall provide the flexibility of associating the escalation policy with different criteria like device/asset/system, category of incident, priority level, organization and contact.

28   The proposed solution shall provide status of registered calls to end-users over email and through web.

29   The proposed solution shall support tracking of SLA (service level agreements) for call requests/Incidents within the service desk through service types (that define response/resolution time)

30   The proposed solution shall provide Problem Management module for recording problems, workarounds and solutions. Must be able to relate and link problems to specific incidents.

31   The proposed solution shall provide the ability to define SLAs for or based on Categories/Request Areas, CI's, Organizations, Priority and Contacts.

Knowledge Management:-

32   The proposed solution shall provide a web-based knowledge base that assists in finding, organizing, and publishing knowledge articles that aid in self-service & faster turn-around time.

33   The proposed solution shall allow analysts to create knowledge articles based on resolved incidents/problems and shall also allow end-users to submit knowledge for consideration (after appropriate approvals).

34   Knowledge Management should provide service desk personnel with speedy and accurate resolutions to their problems, either from a browser or directly from any Ticket screen It should be capable of using the problem description automatically for knowledge-base searches/suggestions.

WTL/PAR /STR/17-18/035

35   Solution should be capable of communicating with multiple sources like corporate SharePoint portal, Service Desk discussion forums, internet search for knowledge search.

Change and configuration Management:-

36   The proposed solution shall provide a fully functional CMDB (Configuration Management Database) as an integral part of the service desk and should be accessible from the same interface.

37   The proposed solution shall allow the IT team & Change Advisory Board to visualize CI relationships with a specified number of relationships on single window.

38   The proposed solution shall provide a Change Order Schedule calendar to track scheduled changes

39   The proposed solution shall support version control for defined Configuration Items.

40   Should support Change Impact and change collision detection based on affected CIs from CMDB.

41   The proposed solution shall provide multiple CI families, classes and relationships out-of-box to reduce implementation time.

42   The proposed solution shall provide a non-linear workflow with decision based branching and the ability to perform parallel processing. The workflow system must also have a graphical workflow designer with drag & drop feature for workflow creation and updates.

End User Desktop support:-

43   The proposed solution shall provide agent-less remote administration tools (chat, software/hardware inventory, file transfer, registry and file-system editing, screenshot capture, remote control and reboot/reconnect) to the analyst for faster resolution of desktop related incidents.

44   The solution should allow the analyst to initiate the remote administration session from the same incident ticket window.

45   The proposed solution shall automatically log the information about activities defined in analyst's menu of remote assistance tool once they are performed.

Collaboration and Mobility:-

46   The Proposed Solution should provide the ability to support these mobile devices (iOS, Android, etc) and should have mobile App for iOS and Android.

47   The Proposed Solution should provide the ability to approve requests (eg : thru mobile devices)

48   The Proposed Solution should provide the ability to display communication in threaded view

49   The Proposed Solution should provide the ability to broadcast message to all users

50   The Proposed Solution should provide the ability to create private and public groups or teams

51   The Proposed Solution should provide the ability to follow people, resource, group and get notified on updates

Reporting:-

52   The proposed solution shall provide commonly used standard out of the box Reports.

53   The proposed solution shall provide a web-based report authoring solution that provides role-based access to existing report content, creation of new reports and ad-hoc/scheduled reporting.

54   The proposed solution shall provide an out-of-box reporting dashboard that indicates analytics about daily service support operations.

Service Catalog: -

55   Service Catalog solution can be accessed by users to request services, including (but not limited to) new assets, asset moves, and new services (e.g system access)

56   The solution should provide self service shopping cart.

57   The solution should provide approval workflow engine.

58   The solution should provide catalog creation and maintenance facilities.

59   The solution should integrate seamlessly with Change, request and incident management areas of existing Service Desk Solution.

60   The solution should provide catalog management features like service bundling so that multiple catalog items definitions can be reused in different bundles (e.g. new employee bundle, office transfer bundle, etc.)

61   The solution should have ability to clearly define and list all IT requests/assets with summary information about their costs, delivery timelines, SLAs. etc.

62   Service Catalog and Service Desk should be able to share single management database.

4.   Upgradation of Existing IPBX (CUCM BE7M) at SHQ

Existing Voice Infrastructure at SHQ	WBSWAN is using existing Cisco Unified communication manager with 771 device licenses. The existing IP PBX has both hard IP Phones and software based client registered to the platform. Some of the district offices also have a IP PBX from Cisco with a capacity of around 100+ IP Phones.
Mandatory Requirement	The bidder is required to offer the upgrade of the existing CUCM with additional 129 licenses (**additional to the existing 771 licenses**) and carry out software version update/hardware upgrade .

WTL/PAR /STR/17-18/035

5. Minimum Specification of SHQ Core 48 port L3 Switch

Qty.	02 (Two) Nos.
Make	Cisco or Equivalent
Model	WS-C3850-48T-E or equivalent
Part No.	

General Specifications
Switch should be 1RU with minimum 48 no. of 10/100/1000 Base-T ports with additional 4 nos. of 10 Gig SFP+ loaded with 4 nos. of SR module from Day1
Switch should have minimum 320 Gbps of stacking bandwidth with dedicated stacking ports and cables with minimum 4 switches in a single stack.
Switching system shall have minimum 176 Gbps of switching fabric and minimum 130 Mpps of forwarding rate.
Switch should have hot swappable 1:1 redundant internal power supply.
Power supply, fan modules and interface modules should be hot swappable.
Switching system shall have minimum 32K MAC Addresses and 1K active Vlans.
Switch should support minimum 2K ACLs, 4K Multicast and 24K Routes.
Should support IEEE Standards of Ethernet: IEEE 802.1D, 802.1s, 802.1w, 802.1x, 802.3ad, 802.1AS, 802.3x, 802.1p, 802.1Q, 802.3, 802.3u, 802.3ab, 802.3z.
Should have static routing, OSPF, OSPFv3, BGP, HSRP for IPv6/VRRPv3, VRF (Virtual routing and forwarding), IGMP v1/v2/v3, PIM and multicast routing.
Shall have 802.1p class of service, marking, classification, policing and shaping. Should support strict priority queuing.
Switch should support management features like SSHv2, SNMPv2c, SNMPv3, NTP, RADIUS and TACACS+ .
Switch should support port security, DHCP snooping, Dynamic ARP inspection, IP Source guard, BPDU Guard, Spanning tree root guard.
Switch should support IPv6 Binding Integrity Guard, IPv6 Snooping, IPv6 RA Guard, IPv6 First Hop Security, IPv6 DHCP Guard, IPv6 Neighbor Discovery Inspection and IPv6 Source Guard.
Should support 802.1x authentication and accounting, IPv4 and IPv6 ACLs and Dynamic VLAN assignment.
Eight egress queues per port for different types of traffic across the stack. Should support 2000 or more aggregate policers per switch
Switch shall support application visibility and traffic monitoring with minimum 40 K sflow/jflow/netFlow entries.
Switch shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.
Switch shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.
Switch / Switch's Operating System should be tested and certifiedfor EAL 2/NDPP or above under Common Criteria Certification.
Switch should be IPv6 Certified/IPv6 logo ready.

Minimum Specification		Line item Qty.	Specification (Quoted / Applicable – by the bidder)	Complied (Yes / No)
Part No.	Description			
Sr No	Specifications			
C1-WS3850-48T/K9	Cisco One Catalyst 3850 48 Port Data	2		
CON-SNT-CWS3854T	SNTC-8X5XNBD Cisco One Catalyst 3850 48 Port Data for 36 months	2		
S3850UK9-163	UNIVERSAL	2		
PWR-C1-350WAC/2	350W AC Config 1 SecondaryPower Supply	2		
C3850-NM-4-10G	Cisco Catalyst 3850 4 x 10GE Network Module	2		
CAB-TA-IN	India AC Type A Power Cable	4		
STACK-T1-1M	1M Type 1 Stacking Cable	2		
CAB-SPWR-150CM	Catalyst Stack Power Cable 150 CM -	2		

WTL/PAR /STR/17-18/035

	Upgrade			
PWR-C1-350WAC	350W AC Config 1 Power Supply	2		
C1FPCAT38502K9	Cisco One Foundation Perpetual - Catalyst 3850 48-port	2		
CON-ECMU-C1F1C382	SWSS UPGRADES C1 Foundation Perp Cat3850 48Prt for 36 months	2		
C1-PI-LFAS-2K3K-K9	Cisco ONE PI Device License for LF & AS for Cat 2k, 3k	2		
C1-ISE-BASE-48P	Cisco ONE Identity Services Engine 50 EndPoint Base Lic	2		
C1F1VCAT38502-03	Tracker PID v02 Fnd Perpetual CAT38502 - no delivery	2		
C1APCAT38502K9	Cisco One Advanced Perpetual - Catalyst 3850 48-port	2		
CON-ECMU-C1A1382K	SWSS UPGRADES C1 Advd Perpetual- Cat 3850 48Prt for 36 months	2		
C3850-48-S-E	C3850-48 IP Base to IP Services Paper RTU License	2		
	4*10G SFP per SHQ Core switch			
SFP-10G-SR-S=	10GBASE-SR SFP Module, Enterprise-Class	8		

6. Minimum Specification of SHQ Firewall

Qty.	**02 (Two) Nos.**
Make	**Cisco or Equivalent**
Model	**FPR2130-BUN or equivalent**
Part No.	

General Specification of Firewall

	Next Generation Firewall- Technical Specifications
	Industry Certifications and Evaluations
1	The Firewall solution offered must be rated as 'leaders' or 'Challengers' in the latest Magic Quadrant for Enterprise Firewall published by Gartner from last 3 years
2	**Hardware Architecture**
	The appliance based security platform should provide firewall, AVC and IPS functionality in a single appliance from day one
	The appliance should have atleast 6 *1G BASE-T and 4 * 10G SFP+ Gigabit ports from Day 1
	The appliance hardware should be a multicore CPU architecture with a hardened 64 bit operating system to support higher memory
	Proposed Firewall should not be proprietary ASIC based in nature & should be open architecture based on multi-core cpu's to protect & scale against dynamic latest security threats.
3	**Performance & Scalability**
	Should support 4.5 Gbps of real-world NGFW (FW, AVC and IPS) performance / throughput
	Firewall should support atleast 2,000,000 concurrent sessions with application visibility turned on
	Firewall should support atleast 20,000 connections per second with application visibility turned on
4	**Firewall Features**
	Firewall should support creating access-rules with IPv4 & IPv6 objects, user/groups, application, geolocation, url, zones, vlan, etc
	Firewall should support manual NAT and Auto-NAT, static nat, dynamic nat, dynamic pat
	Firewall should support Nat66 (IPv6-to-IPv6), Nat 64 (IPv6-to-IPv4) & Nat46 (IPv4-to-IPv6) functionality
	Should support Static, RIP, OSPF, OSPFv3 and BGP, BGPv6
	Should support Multicast protocols like IGMP, PIM, etc

		Should have the capability of passively gathering information about virtual machine traffic, network hosts and their activities, such as operating system, services, open ports, client applications, and vulnerabilities, to assist with multiple activities, such as intrusion event data correlation, elimination of false positives, and policy compliance.
		Solution must be capable of passively gathering details unique to mobile devices traffic to identify a wide variety of mobile operating systems, mobile applications and associated mobile device hardware.
		Should support more than 3000 (excluding custom application signatures) distinct application signature as application detection mechanism to optimize security effectiveness
		Should be capable of dynamically tuning IDS/IPS sensors (e.g., selecting rules, configuring policies, updating policies, etc.) with minimal human intervention.
		Should support more than 25,000 (excluding custom signatures) IPS signatures or more
		Should be capable of automatically providing the appropriate inspections and protections for traffic sent over non-standard communications ports.
		Should be able to link Active Directory and/or LDAP usernames to IP addresses related to suspected security events.
		Should be capable of detecting and blocking IPv6 attacks.
		Should support the capability to quarantine end point by integrating with other security solution like Network Admission Control
		Solution should support full-featured NBA capability to detect threats emerging from inside the network. This includes the ability to establish "normal" traffic baselines through flow analysis techniques (e.g., NetFlow) and the ability to detect deviations from normal baselines.
		The solution must provide IP reputation feed that comprised of several regularly updated collections of poor repuration of IP addresses determined by the proposed security vendor
		Should must support DNS threat inetllifence feeds to protect against threats
		Should must support URL threat inetllifence feeds to protect against threats
		Should support Reputation- and category-based URL filtering offering comprehensive alerting and control over suspect web traffic and enforces policies on more than 280 million of URLs in more than 80 categories.
		Should support safe search for YouTube EDU enforcement
		Should support the capability of providing network-based detection of malware by checking the disposition of known/unknown files using SHA-256 file-hash as they transit the network and capability to do dynamic analysis on-premise (if required in future) on purpose built-appliance (if required in future)
		The Appliance OEM must have its own threat intelligence analysis center and should use the global footprint of security deployments for more comprehensive network protection.
		The detection engine should support capability of detecting and preventing a wide variety of threats (e.g., network probes/reconnaissance, VoIP attacks, buffer overflows, P2P attacks, etc.).
		Should be able to identify attacks based on Geo-location and define policy to block on the basis of Geo-location
		The detection engine should support the capability of detecting variants of known threats, as well as new threats
		The detection engine must incorporate multiple approaches for detecting threats, including at a minimum exploit-based signatures, vulnerability-based rules, protocol anomaly detection, and behavioral anomaly detection techniques. Identify and explain each type of detection mechanism supported.
		Should support Open based Applicaion ID for access to community resources and ability to easily customize security to address new and specific threats and applications quickly
	5	**Management**
		The management platform must be accessible via a web-based interface and ideally with no need for additional client software
		The management platform must be a dedicated OEM appliance and VM running on server will not be accepted
		The management appliance should have 2 x 10G port and integrated redundant power supply from day one
		The management platform must be able to store record of 15000 users or more
		The management platform must provide a highly customizable dashboard.
		The management platform must domain multi-domain management
		The management platform must provide centralized logging and reporting functionality
		The management platform must be capable of integrating third party vulnerability information into threat policy adjustment routines and automated tuning workflows
		The management platform must be capable of role-based administration, enabling different sets of views and configuration capabilities for different administrators subsequent to their authentication.
		Should support troubleshooting techniques like Packet tracer and capture
		Should support REST API for monitoring and config programmability

WTL/PAR /STR/17-18/035

	The management platform must provide multiple report output types or formats, such as PDF, HTML, and CSV.
	The management platform must support multiple mechanisms for issuing alerts (e.g., SNMP, e-mail, SYSLOG).
	The management platform must support 10 GB logs/day for period of 3 months
	The management platform must provide built-in robust reporting capabilities, including a selection of pre-defined reports and the ability for complete customization and generation of new reports.
	The management platform support running on-demand and scheduled reports
	The management platform must risk reports like advanced malware, attacks and network
	The management platform must include an integration mechanism, preferably in the form of open APIs and/or standard interfaces, to enable events and log data to be shared with external network and security management applications, such as Security Information and Event Managers (SIEMs), and log management tools.

Minimum Specification		Line item Qty.	Specification (Quoted / Applicable – by the bidder)	Complied (Yes / No)
Part No.	Description			
FPR2130-BUN	Cisco Firepower 2130 Master Bundle	2		
FPR2130-NGFW-K9	Cisco Firepower 2130 NGFW Appliance, 1U, 1 x NetMod Bay	2		
CON-SNT-FPR2130W	SNTC-8X5XNBD Cisco Firepower 2130 NGFW Appliance, 1U,	2		
FPR2K-PWR-AC-400	Firepower 2000 Series 400W AC Power Supply	2		
CAB-ACSA	AC Power Cord (South Africa), C13, BS 546, 1.8m	4		
SFP-10G-SR-S	10GBASE-SR SFP Module, Enterprise-Class	8		
FPR2K-SSD200	Firepower 2000 Series SSD for FPR-2130/2140	2		
FPR2K-SLIDE-RAILS	Firepower 2000 Slide Rail Kit	2		
FPR2K-FAN	Firepower 2000 Series Fan Tray	2		
FPR2K-SSD-BBLKD	Firepower 2000 Series SSD Slot Carrier	2		
FPR2K-NM-BLANK	Firepower 2000 Series Network Module Blank Slot Cover	2		
FPR2K-PWR-AC-400	Firepower 2000 Series 400W AC Power Supply	2		
SF-F2K-TD6.2.2-K9	Cisco Firepower Threat Defense software v6.2.2 for FPR2100	2		
GLC-LH-SMD=	1000BASE-LX/LH SFP transceiver module, MMF/SMF, 1310nm, DOM	4		
	SHQ - Firepower Management Software			
FS-VMW-2-SW-K9	Cisco Firepower Management Center,(VMWare) for 2 devices	1		
	SHQ 250 Client SSL License	SSL License		
L-AC-APX-LIC=	Cisco AnyConnect Apex Term License, Total Authorized Users	250		
L-AC-APX-3Y-S3	Cisco AnyConnect Apex License, 3YR, 250-499 Users	250		

7. Minimum Specification of SHQ 24 port POE L2 Switch

Qty.	01 (One) Nos.
Make	Cisco or Equivalent

Model	C1-C2960X-24PS-L or equivalent
Part No.	

Minimum Specification for 24 port POE L2 switch at SHQ

Specifications
Switch should be 1RU with minimum 24 nos. 10/100/1000 Base-T ports with PoE+ capability and minimum 370W of PoE Power and additional 4nos. SFP uplink ports populated with 2 nos 1G multimode/ single mode OF module from day 1.
Switch should have slot/ports (excluding uplinks) for minimum 48 Gbps of stacking bandwidth with dedicated stacking ports and cables with minimum 8 switch in stack.
Switch should have internal power supply. Should support external/internal internal redundant power supply.
Switch shall have minimum 88 Gbps of switching fabric and 65 Mpps of forwarding rate.
Shall have minimum 12 K MAC Addresses and 250 active Vlans.
Should support IEEE Standards of Ethernet: IEEE 802.1D, 802.1s, 802.1w, 802.3az, 802.1x, 802.3ad, 802.3x, 802.1p, 802.1Q, 802.3, 802.3u, 802.3ab, 802.3z.
Shall have 802.1p class of service, marking, classification, policing and shaping. Should support strict priority queuing.
Switch should support management features like SSHv2, SNMPv2c, SNMPv3, NTP, RADIUS and TACACS+ .
Switch should support port security, DHCP snooping, Dynamic ARP inspection, IP Source guard, BPDU Guard, Spanning tree root guard.
Switch should support IPv6 Binding Integrity Guard, IPv6 Snooping, IPv6 RA Guard, IPv6 First Hop Security, IPv6 DHCP Guard, IPv6 Neighbor Discovery Inspection and IPv6 Source Guard.
Should support 802.1x authentication and accounting, IPv4 and IPv6 ACLs and Dynamic VLAN assignment.
Switch shall support application visibility and traffic monitoring with minimum 12 K netFlow/sflow/jflow entries.
Switch shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.
Switch shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.
Switch / Switch's Operating System should be tested and certifiedfor EAL 2/NDPP or above under Common Criteria Certification.
Switch should be IPv6 Certified/IPv6 logo ready.
Specifications
Switch should be 1RU with minimum 24 nos. 10/100/1000 Base-T ports with PoE+ capability and minimum 370W of PoE Power and additional 2 nos. SFP+ uplinks ports.
Switch should have slot/ports(excluding uplinks) for minimum 56 Gbps of stacking bandwidth with dedicated stacking ports and cables with minimum 8 switch in stack.
Switch should have internal power supply. Should support external/internal internal redundant power supply.
Switch shall have minimum 88 Gbps of switching fabric and 65 Mpps of forwarding rate.
Shall have minimum 12 K MAC Addresses and 250 active Vlans.
Should support IEEE Standards of Ethernet: IEEE 802.1D, 802.1s, 802.1w, 802.3az, 802.1x, 802.3ad, 802.3x, 802.1p, 802.1Q, 802.3, 802.3u, 802.3ab, 802.3z.
Shall have 802.1p class of service, marking, classification, policing and shaping. Should support strict priority queuing.
Switch should support management features like SSHv2, SNMPv2c, SNMPv3, NTP, RADIUS and TACACS+ .
Switch should support port security, DHCP snooping, Dynamic ARP inspection, IP Source guard, BPDU Guard, Spanning tree root guard.
Switch should support IPv6 Binding Integrity Guard, IPv6 Snooping, IPv6 RA Guard, IPv6 First Hop Security, IPv6 DHCP Guard, IPv6 Neighbor Discovery Inspection and IPv6 Source Guard.
Should support 802.1x authentication and accounting, IPv4 and IPv6 ACLs and Dynamic VLAN assignment.
Switch shall support application visibility and traffic monitoring with minimum 12 K netFlow/sflow/jflow entries.
Switch shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.
Switch shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.
Switch / Switch's Operating System should be tested and certified for EAL 2/NDPP or above under Common Criteria Certification.
Switch should be IPv6 Certified/IPv6 logo ready.

Minimum Specification	Line item Qty.	Specification (Quoted / Applicable – by the bidder)	Complied (Yes / No)

Part No.	Description			
C1-C2960X-24PS-L	Catalyst 2960-X 24 GigE PoE 370W, 4 x 1G SFP, LAN Base	1		
CON-SNT-29X24PSL	SNTC-8X5XNBD Cat 2960-X 24 GigE PoE 370W,4 x 1G SFP for 36 months	1		
CAB-ACSA	AC Power Cord (South Africa), C13, BS 546, 1.8m	1		
C1FPCAT29001K9	Cisco ONE Foundation Lite Perpetual - Cat 2900 8/24 Port	1		
CON-ECMU-C1FPC291	SWSS UPGRADES C1 FND Perpetual - Cat2900 24 Port	1		
C1-PI-LFAS-2K3K-K9	Cisco ONE PI Device License for LF & AS for Cat 2k, 3k	1		
C1-ISE-BASE-24P	Cisco ONE Identity Services Engine 50 EndPoint Base Lic	1		
C1F1VCAT29001-03	Tracker PID v03 Fnd Perpetual CAT29001 - no delivery	1		
GLC-LH-SMD=	1000BASE-LX/LH SFP transceiver module, MMF/SMF, 1310nm, DOM	2		

8.   Minimum Specification of SHQ Internet Router

Qty.	**01 (One) Nos.**
Make	**Cisco or Equivalent**
Model	**ASR1001-X or equivalent**
Part No.	

Minimum Spec for Internet Router:

Specification
The Router should support modular architecture, multi-core Processor, internal 1:1/1:N field replaceable power supply (from Day1). It should have a dedicated control and data plane independent to each other.
The router must support intelligent traffic management and QoS features to allocate network resources on application needs and QoS priorities.
The router must have redundant power supply module. The router must support 220V AC power supply module. There should not be any impact on the router performance in case of one power supply fails. The router must support on line hot insertion and removal of cards.
Router should have atleast onboard/inbulit 8 GB DRAM on RP to handle routing and other processes. It should also support 1GB flash memory for configuration & OS backup.
The router line card must have the following interface as defined in the IEEE, ITU-T:
6x1G LAN/WAN ports to be populated with 4 nos. of Fiber based 1000BASE-LX/LH SFP transceiver module from Day 1. 2x10Gbps SFP based LAN/WAN Port should be available for future use. Any required interface activation license for the 10G interface can be procured separately in the future
The router line card must support following interface:
Fast Ethernet, Gigabit Ethernet, Channelized STM1, STM4, STM16, 10G Ethernet, V.35 Serial interfaces /Framed/Un-Framed E1 Ports.
1 empty slot for future expansion
Should support minimum 8Mpps and scalable up to 15 Mpps of forwarding performance
The routing aggregate throughput should be at least 5 Gbps which can scale up to 20 Gbps to meet future requirement without changing the hardware.
The router must support 1,000,000 IPv4 or 1,000,000 IPv6 route entries in Forwarding information Base (FIB)/Routing Information Base (RIB). Should also support at least 18, 000 Multicast routes.
The router must support IGMPv2 and IGMPv3, with at least 3000 Multicast Groups
The router must support 2000 or more unique ACLs
The router should have minimum 2000 VRF / VPN (Ipsec) tunnel.

The Router solution be a carrier-grade Equipment supporting the following:
The router should be able to select a WAN path based on interface parameters such as reach ability, load, throughput, delay and link cost of using a performance algorithm. Should also be able to load balance across two different service providers.
The router must support the IPv4 and IPv6 stack in hardware and software. It must support both IPv4 and IPv6 routing domains separately and concurrently. It must also support the ability to bridge between IPv4 and IPv6 routing domains. The router must have hardware assisted Network Address Translation (NAT) capability as per RFC 1631.
The router must support RIPv1 & RIPv2, OSPF, BGPv4 and IS-IS, MPLS, MPLS LDP, MPLS L3VPN, MPLS L2VPN, Multicast VPN (mVPN) and latest standard RFC protocols
The router should support Multicast VPN (mVPN)
Should support IP version 6 in hardware from Day 1. Must be ready with IPv4 / IPv6 dual stack functionality
Should support IPv6 static route, OSPFv3, IS-IS support for IPv6, Multiprotocol BGP extensions for IPv6, IPv6 route redistribution.
Should support IPv6 Quality of Service & IPv6 Multicast.
VRRP, Active/active or Active/standby, Stateful failover. Graceful Restart for OSPF, BGP, LDP, MP-BGP etc.
The router must support Protocol Independent Multicast Dense Mode (PIM-DM) and Sparse Mode (PIM-SM).
The router must support multiprotocol BGP extensions for multicast.
The router must support multicast load balancing traffic across multiple interfaces.
The router must support RFC 3618 Multicast Source Discovery Protocol (MSDP).
The router must support Any cast Rendezvous Point (RP) mechanism using PIM and Multicast Source Discovery Protocol (MSDP) as defined in RFC 3446.
The router must be capable of doing Layer 3 classification and setting ToS/Diffserve bits on incoming traffic using configured guaranteed rates and traffic characteristics. The marking of the ToS/Diffserve bits should be non-performance impacting.
The router shall perform traffic Classification using various parameters like source physical interfaces, source/destination IP subnet, protocol types (IP/TCP/UDP), source/destination ports, IP Precedence, 802.1p, MPLS EXP, DSCP etc.
The router shall support at least 16k queues per system with less than 100-microsecond latency for high-priority applications to offer granular QoS, policing and shaping capabilities.
Queuing and Scheduling must be able to be configured on as per physical port or logical port basis.
The router must support flow based rate limiting method based on per source address, destination address or both.
The scheduling mechanism must allow for alternate priority routing traffic necessary to keep from starving other priority queues.
Stateful firewall, zone based firewall protection. Highly scalable filtering, unicast RPF, and rate limiting protects against IP spoofing and DOS attacks
Ubiquitous security features such as port mirroring, encrypted management session traffic, secure tunneling capabilities, secure remote logins, and configurable privilege levels and user accounts
Performance based routing or Real Time Performance Monitoring to ensure critical traffic is taking best path. Should support extensive support for SLA monitoring for metrics like delay, latency, jitter, packet loss
Routers should support Configuration rollback
Support for accounting of traffic flows (Netflow/Jflow) for Network planning and Security purposes
Routers should support Software upgrades
Device should have Console, Telnet, SSH1 and SSH2 support for management, Out of Management Port
Router shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.
Router shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.
Router / Router's Operating System should be tested and certified for EAL 3/NDPP or above under Common Criteria Certification
Router should be IPv6 Certified/IPv6 logo ready day 1

Internet Router with 4 loaded 1G SFP interface			
Minimum Specification	**Line item Qty.**	**Specification (Quoted / Applicable – by the bidder)**	**Complied (Yes / No)**

Part No.	Description			
C1-ASR1001-X/K9	Cisco ONE - ASR1001-X	1		
CON-SNT-A1001XK9	SNTC-8X5XNBD C1 ASR1001-X Chassis,IPBase APIC EM APIs	1		
ASR1K-INTERNET	ASR1K-Int Edge/Peering incl. BGP/NAT/ZBFW - tracking only	1		
GLC-LH-SMD	1000BASE-LX/LH SFP transceiver module, MMF/SMF, 1310nm, DOM	4		
M-ASR1001X-8GB	Cisco ASR1001-X 8GB DRAM	1		
NIM-BLANK	Blank faceplate for NIM slot on Cisco ISR 4400	1		
SPA-BLANK	Blank Cover for regular SPA	1		
C1F1PASR1K9	Cisco1 FND Perpetual Suite AES IPSec FW AVC Prime	1		
CON-ECMU-CFPASR11	SWSS UPGRADES C1 FND Perp Suite AES IPSec FW AVCPrime	1		
C1-SLASR1-AES	Cisco ONE ASR 1000 Advanced Enterprise Services License	1		
C1-ASR1-IPSEC-RTU	Cisco ONE Encryption Right-To-Use Feat Lic ASR1000 Series	1		
C1-FLSASR1-AVC	Cisco ONE Appl. Visibility and Control License ASR1000	1		
C1-FLSASR1-FW	Cisco ONE FW License for ASR1000 Series	1		
C1-PI-LFAS-ASR1K9	Cisco ONE PI Device License for LF & AS for ASR 1000	1		
C1F1VASR1-02	Tracker PID v02 Fnd Perpetual ASR1 - no delivery	1		
SASR1K1XUNLIK9-166	Cisco ASR1001-X IOS XE UNIVERSAL W/O LI	1		
ASR1001-X-PWR-AC	Cisco ASR1001-X AC Power Supply	2		
CAB-IND	AC Power Cord (India)	2		

9. Minimum Specification of IP Phones at SHQ

Qty.	100 Nos.
Make	
Model	
Part No.	

Sr. No.	Minimum Specifications	Compliance (Yes/No)
	The phone should meet the following specifications	
	The phone should be SIP based.	
	Should have 3.5" or higher diagonal Display and supporting resolution of 320 x 160 or better pixel.	
	Should have full duplex speaker phone and dedicated headset port with RJ-9 interface.	
	It should support G.711, G.722, G.729a and iLBC audio compression codecs.	
	Should provide the directory services to the user by displaying the missed, received and dialed call details including the caller ID and calling time.	
	Should have 2 or more programmable line keys.	
	Should have 2 or more programmable soft keys.	
	Should support IEEE 802.3af POE Class 1, and external AC power adapter option.	
	The phone should have two 10/100 BASE-T Ethernet ports, one for the LAN connection and the other for connecting to PC/laptop.	

	The phone should support QoS mechanism through 802.1p/q.	
	The phone should support XML based services and applications.	

10. Minimum Specification of AAA Server at SHQ

Qty.	1Nos.
Make	Cisco or equivalent
Model	SNS 3515 – K9 or equivalent
Part No.	

Minimum Technical Specification of AAA Server

Sr NO.	Specification
1	Should be appliance based with capability to manage AAA Services for at least 1000 Devices.
2	Should provide authentication services to all the users connecting to the network, should enforce security policies on the end stations.
3	Should offer centralized command and control for all user authentication, authorization, and accounting from a Web-based, graphical interface, and distribute those controls to hundreds or thousands of access gateways in the network.
4	The same AAA Server should leverage access framework to control administrator access and configuration for all RADIUS enabled network devices in network.
5	Should provide Automatic service monitoring, database synchronization, and importing of tools for large-scale deployments Lightweight Directory Access Protocol (LDAP) and Open Database Connectivity (ODBC) user authentication support
6	Should be provisioned with Flexible 802.1X authentication type support, including Extensible Authentication Protocol Transport Layer Security (EAP-TLS), Protected EAP (PEAP), and EAP-Message Digest Algorithm 5 (EAP-MD5)
7	Should have Downloadable access control lists for any Layer 3 device, including Routers, Switches, Firewalls, and VPNs
8	Should have features like Device command set authorization
9	Network access restrictions
10	User and administrative access reporting
11	User and device group profiles
12	Should have a Web-based user interface to simplify and distribute configuration for user profiles, group profiles.
13	Should be able to support large networked environments with support for redundant servers
14	Lightweight Directory Access Protocol (LDAP) authentication forwarding support for authentication of user profiles stored in directories from leading directory vendors, including Sun, Novell, and Microsoft.
15	Should have different access levels for each AAA Server administrator-and the ability to group network devices-enable easier control and maximum flexibility to facilitate enforcement and changes of security policy administration over all the devices in a network.
16	Should be used across virtually any network access server from the same vendor.
17	Should offer token server support for any One-Time Password vendor that provides an RFC-compliant RADIUS interface (such as RSA, Pass Go, Secure Computing, Active Card, Vasco, and Crypto Card).
18	Should act as a policy decision point in Policy Control deployments. Using policies that are configured, it should evaluate the credentials sent to it by Host Agent, determine the state of the host, and send the AAA client ACLs that are appropriate to the host state.
19	Evaluation of the host credentials should enforce many specific policies, such as OS patch level and antivirus DAT file version.
20	Should support Downloadable IP ACLs, Certification Revocation List (CRL)
21	To allow administrators to classify access requests according to network location, membership in a network device group, protocol type, or other specific RADIUS attribute values sent by the network device through which the user connects. Authentication, access control, and authorization policies should be mapped to specific profiles.

Minimum Specification	Line item Qty.	Specification (Quoted / Applicable – by the	Complied (Yes / No)

WTL/PAR /STR/17-18/035

Part No.	Description	bidder)		
SNS-3515-K9	Small Secure Network Server for ISE Applications	1		
SW-3515-ISE-K9	Cisco ISE Software for the SNS-3515-K9 appliance	1		
SFS-250V-10A-ID	SFS Power Cord - 250V, 10A , India	1		
SNS-MR 1X081RU-A	8GB DDR4-2133 Mhz Memory Module	2		
SNS-MRAID12G-1GB	1GB FBWC for Cisco 12G SAS Modular RAID	1		
SNS-PSU1-770W	770W power supply	1		
R2XX-RAID0	Enable RAID 0 Setting	1		
SNS-MRAID12G	Avila Cisco 12G SAS Modular Raid Controller	1		
SNS-CPU-E52620D	2.40 GHz E5-2620 v3/6C	1		
SNS-HD600G10K12G	600GB SAS 10K RPM HDD	1		
SNS-MLOM-IRJ45	MLOM Intel -Quad Port 1Gb RJ45	1		
L-ISE-TACACS=	Cisco ISE Device Admin License	1		
L-ISE-BSE-2500=	Cisco Identity Services Engine 2500 EndPoint Base License	1		

11. Minimum Specification of DNS, Proxy , NMS, Servers

Qty.	4 Nos.
Make	
Model	
Part No.	

A. SERVER

#	Component	Description	Qty	Complied
				(Yes/No)
01	Make & Model	(Specify)	4	
02	Market position	The OEM for the proposed server must be in Leaders Quadrant in the last Gartner's report of "Magic Quadrant for Modular Servers" or should have had atleast 10% worldwide server market share by revenue as per IDC report in any of the previous 2 quarters		
03	Sub components	All subcomponents quoted within the server should be from the same OEM & factory integrated		
04	Form Factor	Max. 2U rack mounted with Sliding Rails		
05	Configured CPU	2 x E5-2640 v4		
06	Memory configured	256GB DDR4 RAM		
07	Disks supported	8 x 2.5" SAS, SATA, nearline SAS, SSD HDD.		
08	RAID Controller	12Gbps PCIe 3.0 with support for RAID 1, 5,		
09	Disks configured	3 x 1.2TB 10k rpm SAS disks		
10	DVD writer	DVD RW		
11	I/O slots	5 x PCIe 3.0 slots including atleast 2 nos. slots with x16 link width		
12	Ethernet ports	Quad port 1Gb Base-T Dual Port 10Gbps SFP+		
13	FC ports	Dual port 16 Gbps FC		
14	Certification and compliances	Microsoft Windows Server, Hyper-V, VMWare, Red Hat Enterprise Linux (RHEL), SUSE Linux Enterprise Server (SLES)		
15	Power Supply	Platinum rated redundant Power Supply with necessary		

		power cables		
16	SD Modules slots	Dual SD Module slots		
	Configuration & management	Real-time power meter & graphing		
		Power thresholds, alerts & capping		
		Historical power counters		
		Temperature monitoring & graphing		
		Monitoring fan, power supply, memory, CPU, RAID, NIC for impending failure		
		Out of Band Performance Monitoring		
17	Management	Should support: • Real-time out-of-band hardware performance monitoring & alerting • Agent-free monitoring, driver updates & configuration of SAS controllers • Real-time agent-free RAID management • Out-of-band hardware & firmware inventory • Agent-free external storage management • Agent-free monitoring of FC, HBA and CNA controllers • Agent-free health monitoring • Zero-touch auto configuration to deploy a baseline server configuration profile automatically as soon as the server is connected to the network		
18	HTML5 support	HTML5 support for virtual console & virtual media without using Java or ActiveX plugins		
19	Management (continued)	• Tools to perform automated hardware configuration and Operating System deployment to multiple servers through centralized management • Zero-touch repository manager and self-updating firmware system to build self-maintaining repositories and configure servers to automatically update to new versions of software on specified schedules • Virtual IO management / stateless computing • Agentless power monitoring & capping • Support for Redfish API for simple and secure management of scalable platform hardware • Configuration drift detection		
20	LCD panel	Should display system ID, status information and system error messages. The LCD background should light up in different colours during normal system operation & error conditions. The LCD panel should display error code followed by descriptive text.		
21	Intrusion alert	Intrusion alert in case chassis cover being opened		
22	Hardware warranty	3years On-site comprehensive warranty with 24x7x365 **onsite** support from server OEM . Post installation, 3-year warranty of the proposed products should reflect in the support web site of the OEM.		
	O/S			
		Description		
	OS - 1	**MS Windows Server SW. with above BOM & 3Years warranty**	**2**	
	OS - 2	**Redhat Ent. Linux SW. with above BOM & 3 Years warranty**	**1**	
	OS - 3	**Suse Linux SW. with above BOM & 3 Years warranty**	**1**	

B. Virtualization

Serial No.	Description	Qty.	Compliance

WTL/PAR /STR/17-18/035

01	Virtualization	VMware vSphere Enterprise Plus bundled with the server hardware & first level support service from server OEM, 3-years maintenance (Qty: 1 per server). Server OEM's part no. to be provided	10	
02	Virtualization management	VMware vCenter provided with the server hardware with first level support service from server OEM, 3-years maintenance (Qty: 1 for the landscape). Server OEM's part no. to be provided	1	

C.   KVM console & display console

	Serial No.	Description	Qty.	
01	KMM (keyboard, mouse, monitor) console	* 1U Rack mountable console with USB connectors. * OEM (same as server) make * 18.5" TFT folding Monitor (1024x768) with VGA connection * Integrated keyboard, touchpad & 2-button mouse	1	
02	KVM Console Switch	* Rack mountable (max 1U) console switch * OEM (same as server) make * 8 x Analog Rack Interface (ARI) ports to access servers * 4 x USB ports * Requisite server interface modules & access cables to connect upto 8 servers	1	

12. Video Conferencing Solution at SHQ

A.   Upgradation of Existing MCU (Polycom RMX 200)

WBSWAN has an existing set-up of 1 no. of Polycom RMX 2000 systems with capacity to connect 45 locations at 720p / 22 locations at 1080p at 30fps. The MCU is a 1U appliance provided with all the necessary accessories to integrate into a 19 inches or 23 inches rack and should have redundant power supply.

- Video Standards and Resolutions :

The MCU supports H.323, SIP standards for communications.

The MCU supports H.261, H.263, H.264 AVC/ SVC, H.264 High Profile

The MCU supports 1080p 60 fps, 1080p 30 fps, 720p 60 fps and 720p 30fps

- Audio Standards and Features :

It supports G.711, G.729A, G.722, G.722.1, AAC-LD or better

It supports 20kHz bandwidth with crystal clear audio and stereo sound.

Automatic Gain Control and Automatic Noise Suppression

Minimum Specification of Meeting Server/ MCU

Qty.	1 Nos.
Make	**Polycom RMX2000 or Equivalent device matching the below specs and requirement**
Model	
Part No.	

Minimum Technical Specification

Features	Specifications
System Capacity	Meeting server solution should support 190 ports at 720p/ 1080p @ 30fps on IP in continuous presence mode with 30fps and H.264 resolution and AES encryption.
	Multi-point video Conferencing Solution should be capable of offering a Full High Definition 1080p 30fps in real-time for 90 number of concurrent ports / users in single call in continuous presence and voice activation mode & with intelligent built-in capability for dynamic bandwidth, resolution matching to give each user an experience basis his available bandwidth.
	It should as well provide network flexibility for a reliable distributed architecture and cost-effective scalability for future requirements.
	MCU should be on secure platform.

	Should be able to support to connect H.323 and SIP devices directly or using additional hardware / Software. In case, additional
Video Standards and Resolutions	The MCU should be a hardware appliance with 1 U or more rack mountable and should be preloaded with all the required software from the OEM warehouse
	The MCU should support H.263, H.264 AVC
	The MCU should support 1080p 60fps, 30 fps, 720p 30 and 60 fps.
Content Standards and Resolutions	The MCU should support content sharing using standard based H.239 and BFCP over SIP with HD1080 resolution.
	The MCU should support H.239 and encryption in SIP & H.323 modes
	The MCU should have a provision for minimum 10 concurrent conferences. The MCU should be used only for multipoint calls with 3 or more number of users. The point to point call between two hardware based endpoints or soft clients should not consume a MCU port.
Audio Standards and Features	It should support G.711, G.722 or better
MCU Features	The MCU shall support aspect ratio of 16:9 and 4:3.
	The MCU shall support a mix of resolutions in both Voice Activated mode and Continuous Presence. Each endpoint shall receive at the maximum of its capacity without reducing the capacity of another.
	Dynamic CP layout adjustment (MCU will choose the best video layout according to the number of participants in the conference).
	The MCU should support distributed architecture with intelligent and automatic call routing if required in future.
	The MCU should be able to natively register and authenticate with H.323 gatekeeper / SIP registrar.
	The VC endpoints, soft clients, gatekeeper, firewall traversal, management, room based VC endpoints, MCU should be from same OEM
	The OEM should be placed in the Gartners leaders magic quadrant for last 3 consecutive years
Conference Feature	The MCU shall support conferences that permanently exist but use no resources if no participants are in the conference. The MCU should support dial in, dial out, adhoc, scheduled, personal meeting room based conferences.
Network and security features	The MCU shall support AES encryption 128 bit or above for every participant without affecting any other feature, functionality or port count.
	The MCU must support TLS for SIP. The MCU should have the ability to display upto 20 sites on a single screen in continuous presence conferences. The MCU should have minimum 10 different conference layouts.
Interoperability &Standards	MCU must be open standards based and not based on proprietary protocols.

B.   **Upgradation of Recording Server**

Minimum Specification of Recording Solution

Qty.	1 Nos.
Make	**Polycom RSS 2000 or Equivalent device matching the below specs and requirement**
Model	
Part No.	

- **Existing Recording Solution Specification**

Application Features	Records single point and multipoint conferences with full H.239 and BFCP content capture
Audio/Video Support	Live Video Resolutions: C(S)IF, 4CIF, SD, HD and HD1080p
	Audio support: G.711, G.722, G.722.1, Annex C, Siren 14, Siren 22 Stereo
Recording	support 5 concurrent video conferencing recording sessions with full video, audio and content. Upgradable to support up to 15 concurrent video conferencing recording session with full video, audio and content without change in main hardware.
	Records audio/video at varying bit rates – 128 kbps to 4 Mbps
	Up to1080p HD record and playback, record stereo calls in single point and multipoint

	calls

Application Features	Records single point and multipoint conferences with full H.239 and BFCP content capture
	High definition (HD) support with 720p or better H.264 video
	Playback of video content from endpoints or web browsers
	API support for third party integrations
	H.323 or equivalent standards-based for use with third party conferencing systems
Audio / Video	Live Video Resolutions: 720p HD or better
	Video Support: H.263/ H.263+/ H.264
	Audio support: G.711 / G.722 / G.722.1 or better
	Records in Window Media (WMV) / flv / MP4 video formats or equivalent
	Should support minimum 5 concurrent multi party HD720p or better video conferencing recording sessions with full video, audio and content.
	Records audio/ video at up to 2 Mbps
	Recording server / appliance should have power redundancy.
	All of the Media Library should be exportable / recorded to a CD / DVD

Minimum Specification for Recording Solution

C. Minimum Specification of Gatekeeper

Qty.	1 Nos.
Make	Polycom DMA 7000 or Equivalent
Model	
Part No.	

Existing Gatekeeper Specification (DMA 7000)

System	WBSWAN has an existing set-up of 1 no. of Polycom DMA7000 system with capacity to connect 50 concurrent calls. The bidder needs to check the feasibility of upgrading the existing Gatekeeper system or else quote completely new set up meeting the total requirement.
	The System should be 19'' rack mountable appliance with minimum 1U size or more.
	The System should be supplied with necessary power cards, cables, connectors, CD's, manuals, bracket accessories, wire managers and other appropriate accessories.
System Capacity	The system should support registration of atleast 100 H.323 and SIP devices.
	The system should support minimum 100 concurrent calls and should support 200 concurrent calls in future through software license.
Gatekeeper Features	H.323 administrative zone establishment
	Call establishment within a zone and between zones with admission control
	Bandwidth and session management within a zone and between zones
	Address lookup and resolution, and translation between E.164 and IP addresses
	The gatekeeper should support Active Directory integration and enable each user with a personal meeting room created with the AD fields.

Proposed Minimum Specification for Gatekeeper

	The Call control server must be able to provide Gatekeeper services using H323 protocol. It should be able to integrate with other Gatekeepers using H323 trunks or Neighboring Trunk. The Call control server must also provide SIP registrar and SIP proxy service.
H323 registration:	The video conferencing endpoints and MCU must be able to register with the H323 Gatekeeper.
SIP registration:	The video conferencing endpoints and MCU must be able to register with the SIP Server.
H.323-SIP interworking	The Call control device should be able to connect calls between "H323 only device "and "SIP only device".
IPV4-IPV6 Interworking	The Call control device should be able to interwork between IPV4-IPV6 networks.
Capacity	Should allow at least 500 device registrations and minimum 190 concurrent calls from

	day one.
	The H323 registration over TCP/UDP should support H323 ID.
	The SIP registration over TCP/UDP should support SIP URI.
Call Control	Should provide flexibility such as creation of dialing pattern, Setting Search policies, Transform dial patterns or modifying the dial plan.
Security	Security and authentication for registration of HD VC Endpoints. This should support at least authentication using login ID and password
Bandwidth management	Should allow restricting the bandwidth at the server level so that calls cannot exceed the defined bandwidth.
Authentication and Registration	Registration to the server should be restricted by creation of either an allow list or deny list.
	Ability to allow registration to the server only upon authentication of the device.
	Creation of local authentication database or pulling of authentication credentials from an LDAP or AD server.
Firewall Traversal Soluton	Firewall Traversal Solution to allow Video calls to be made from the SWAN's network to the Internet and vice versa. The calls should be H323 and SIP and must be able to support HD resolutions.
Standards	Should support firewall traversal solution using the H.460.18 and H.460.19 protocol.
Dial plan and call connectivity	The solution should support ability to call to public IP addresses. The proposed Video conference solution should be interoperable with the proposed IP Telephony solution such that two way audio and video call is possible between the two using the single dial plan
	Should support the ability for devices on the internet to be reached using a H323 ID or E.164 alias.
Integration with DNS	The Firewall Traversal Solution must have integration with DNS using SRV records or AAA records so as to have domain name based calling.
Capacity	Should support at least 190 concurrent calls with H.264 video compression from day one and must have the scalability to upgrade to 300 concurrent calls traffic with H.264 video compression in future on the same hardware.
Protocols	Should support all the H323 and SIP functionalities such as: H.239, BFCP, AES encryption, H.235
Authentication and Registration	The solution must support the ability to create authentication credentials for a VC device to be registered and make calls.
Management	Management of recommended Video Conferencing devices and Infrastructure shall be deployed centrally
	The Management application should provide system management capabilities of all the proposed full high definition solution comprising of video conferencing endpoints, MCU, Gate keepers, firewall traversal. It should be possible to get detailed configuration of these devices.
	It should allow monitoring of conferences and participant
	The system must be able to manage minimum 500 devices including endpoints and call control from day one and should be scalable to 200 devices in future.
Scheduling	The Application should Schedule multi-point conferences
	MCU meetings that will have Dial in and dial out participants from the MCU.
	Lock conference, preventing new participants from joining.
	Should be able to book recurring meetings and video resources
	Should show overview of scheduled meetings, resources and participants.
	Supports hierarchical phonebook structure.
Templates / Provisioning	The application should have provision for custom template creation for management and provisioning.
	It must be possible to monitor live ongoing conferences. Both Scheduled as well as ad-hoc conferences must be manageable.
	Functionalities such a mute/unmute of individual sites, connect/disconnect of individual sites, view bandwidth of each sites, audio and video protocol of each site, snapshot if needed must also be possible.
Desktop Clients	The desktop client should be HD720p based and should work on android/ios/windows PC/Laptop. The solution should be provided for 500 desktop clients
	The desktop client should be software upgraded from the central server

The desktop client should have chat and presentation share capability
The desktop client should all one to one and group chat feature
The desktop client should be SIP/H.323 and support presentation sharing using H.239/BFCP.
The desktop client should be WebRTC based or browser based or application based
The desktop client should have a guest feature so that a guest user can join the conference by simply clicking a URL.

13. Technical Specification of DHQ Routers

Qty.	19 Nos.
Make	Cisco or equivalewnt
Model	ISR4451-X-V/K9 or equivalent
Part No.	

Minimum Technical Specification for DHQ Routers

	DHQ Router -- 16* Channelized E1 + 2*FXO + 4 Combo LAN/WAN interface
Sr No	**Specifications**
	The Router should support modular architecture, multi-core Processor, internal redundant field replaceable power supply (from Day1). The Router Should have capabilities of seamless field upgrade/replacement (without interrupting running processes and services) for modular interfaces.
	Router should have 4 x 1G SFP/Base-T (combo or dedicated) port and 16 nos of E1 G.703 Port from Day 1.
	The Router should support interfaces supported by router like Channelized E1/T1, V.35, G.703, LTE, Gigabit and 10G Ethernet modules to accommodate field upgrades without rebooting the router.
	The Router should have 1 empty slot for future use
	Router should have minimum 8 GB of onboad/inbuilt DRAM/RAM for data plane + control plane processes and 2 GB Flash from Day 1. Should support expandability 8 DRAM and 4 Flash.
	The router must support IKEv1, IKEv2, GRE and IPSEC from day 1. The proposed solution in WBSWAN should serve the GRE encryption for traffic from any location to other location on demand and also should able to create GRE tunnel with existing core router at SHQ.
	Router should support 1000 K IPv4 and IPv6 routes, with 4000 GRE and IPSEC tunnel.
	The router should support 1.6 gbps of IPSEC Bandwdith ,incase required in the future
	Router should support IGMP v1/v2/v3 and PIM multicast routing
	Router should support static Routes, OSPFv2, OSPFv3, BGP4, MBGP, BFD, Policy based routing, IPv4 and IPv6 tunneling
	The Router should support Zone Based Firewall feature or an external appliance for the same functionality can be provided.
	Router should Support Traffic Optimization feature built in the router operating system or an external appliance for the same functionality can be provided.
	Shall have 802.1p class of service and marking, classification, policing and shaping.
	Router should support SSHv2, SNMPv2c, SNMPv3 and NTP
	Routers should support AAA using RADIUS and TACACS+
	Should have extensive support for IP SLA and best path selection for metrics like delay, latency, jitter, packet loss to assure business-critical IP applications from Day1.
	The router should support cRTP to compress voice (RTP) streams
	Router should support monitoring of network traffic with application level insight with deep packet visibility into web traffic, RTP-Based VoIP traffic.
	Router should have traffic load balancing capability on dual WAN Links based on based on advanced criteria, such as reachability, delay, loss, jitter and bandwidth utilization.
	Router shall have capability to add on demand IPSec VPN tunnels dynamically established multipoint-to-multipoint IPSEC based spoke-to-spoke VPN tunnels matching traffic conditions
	Router shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.
	Router shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.
	Router/Router's Operating System should be tested and certified for EAL 3/NDPP or above under Common Criteria Certification

WTL/PAR /STR/17-18/035

	Router should be IPv6 Certified/IPv6 logo ready
	Voice Features (in case router can handle voice gateway capabilities).
	The router should have call processing backup mechanism that allows IP phones to register to the router
	The system should be provided with the necessary Remote Survivability license for at least 25 IP phones from Day 1 for the 17 DHQ locations, and 150 IP phone licenses for 2 DHQ locations with scalability to handle atleast 1000 IP phone in Survivable mode
	The Router should have 2 nos. of FXO port from Day1
	The Router should have enough voice Signal Processor module to handel required voice traffic.
	Voice Features (in case external appliance provide).
	Should have multi-core Processor, in 1RU platform.
	Should have minimum 2 x 1G Base-T
	Should have minimum 512 MB of DRAM.
	Should have voice have call processing backup mechanism that allows IP phones to register the remote gateway
	Should be scalable to handel atleast 2000 IP phone in Survivable mode
	Should support voice interfaces like PRI, FXO & FXS to accommodate field upgrade (without interrupting running processes and services)
	It should support embedded hardware encryption acceleration, voice capable digital signal processor (DSP) slots or equivalent feature
	It should support minimum 256 DSP resources
	In Survivable mode user should able to see Caller ID in respective phone display

Minimum Specification		Line item Qty.	Specification (Quoted / Applicable – by the bidder)	Complied (Yes / No)
Part No.	**Description**			
C1-CISCO4451/K9	Cisco ONE ISR 4451 (4GE,3NIM,2SM,8G FLASH,4G DRAM, IPB)	19		
CON-SNT-C14451K9	SNTC-8X5XNBD C1 ISR 4451 (4GE,3NIM,2SM,8G FLASH) for 36 months	19		
SL-44-IPB-K9	IP Base License for Cisco ISR 4400 Series	19		
NIM-8CE1T1-PRI	8 port Multiflex Trunk Voice/Channelized Data T1/E1 Module	38		
GLC-LH-SMD	1000BASE-LX/LH SFP transceiver module, MMF/SMF, 1310nm, DOM	76		
PWR-4450-AC	AC Power Supply for Cisco ISR 4450 and ISR4350	19		
PWR-4450-AC/2	AC Power Supply (Secondary PS) for Cisco ISR 4450	19		
CAB-ACSA	AC Power Cord (South Africa), C13, BS 546, 1.8m	38		
CAB-CONSOLE-USB	Console Cable 6ft with USB Type A and mini-B	19		
MEM-FLSH-8G	8G eUSB Flash Memory for Cisco ISR 4430	19		
MEM-4400-DP-2G	2G DRAM (1 DIMM) for Cisco ISR 4400 Data Plane	19		
POE-COVER-4450	Cover for empty POE slot on Cisco ISR 4450	38		
SM-S-BLANK	Removable faceplate for SM slot on Cisco 2900,3900,4400 ISR	19		
C1AUPISR4400SK9	Cisco ONE Advanced UC Perpetual License ISR 4400	19		
CON-ECMU-C1A4400S	SWSS UPGRADES C1 Advanced Perpetual Lic ISR 4400 for 36 months	19		
SL-44-UC-K9	Unified Communication License for Cisco ISR 4400 Series	19		
FL-CME-SRST-25	SRST-25 Seat License (CME uses CUCME Phone License ONLY)	19		
FL-CUBEE-25	Unified Border Element Enterprise License - 25 sessions	19		

C1A1VISR4400S-01	Tracker PID v01 Adv Perpetual ISR4400S - no delivery	19		
SISR4400UK9-316S	Cisco ISR 4400 Series IOS XE Universal	19		
SM-X-NIM-ADPTR	SM-X Adapter for one NIM module for Cisco 4000 Series ISR	19		
NIM-2FXO	2-port Network Interface Module - FXO (Universal)	19		
PVDM4-64	64-channel DSP module	19		
USE-BUNDLED-PVDM	Choose to assemble the PVDM in a Voice bundle on T1/E1 card	19		
C1-SL-2500-AKC	Cisco ONE Promo LIC Akamai Connect for 2500 connection WAAS	19		
MEM-4400-8G	8G DRAM (4G+4G) for Cisco ISR 4400, Spare	19		
C1F1PISR4400SK9	Cisco ONE Foundation Perpetual License ISR 4400	19		
CON-ECMU-C1F1PISR	SWSS UPGRADES Cisco ONE Foundation Perpetual License I for 36 months	19		
SL-44-SEC-K9	Security License for Cisco ISR 4400 Series	19		
SL-44-APP-K9	AppX License for Cisco ISR 4400 Series	19		
ISRWAAS-RTU-2500	ISRWAAS RTU for 2500 connections	19		
VWAAS-RTU-2500	VWAAS 2500 conns RTU for UCS-E on single ISR only	19		
C1-PI-LFAS-ISR-K9	Cisco ONE PI Device License for LF, AS, & IWAN App for ISR	19		
C1-LIC-VCM-1N	Cisco ONE Promo license to manage one WAAS node	19		

14. Technical Specification of DHQ L3 Switches

Qty.	19 Nos.
Make	Cisco or equivalent
Model	WS-C3650-48PS-S or equivalent
Part No.	

Minimum Technical Specification for DHQ L3 Switch

	DHQ L3 Switch	
Sr No	Specifications	Compliance (Yes/No)
	Switch should be 1RU with minimum 48 no. of 10/100/1000 Base-T POE+ ports with additional 4 nos. of 1 Gig SFP loaded with 2 nos. of SM module from Day1	
	Switch should support minimum 96 Gbps of stacking bandwidth with dedicated stacking ports and cables with minimum 4 switches in a single stack.	
	Switching system shall have minimum 176 Gbps of switching fabric and minimum 77 Mpps of forwarding rate.	
	Switch should have hot swappable 1:1 redundant internal power supply.	
	Power supply, fan modules and interface modules should be hot swappable.	
	Switching system shall have minimum 32K MAC Addresses and 1K active Vlans.	
	Switch should support minimum 2K ACLs, 2K Multicast and 24K Routes.	
	Should support IEEE Standards of Ethernet: IEEE 802.1D, 802.1s, 802.1w, 802.1x, 802.3ad, 802.3x, 802.1p, 802.1Q, 802.3, 802.3u, 802.3ab, 802.3z.	
	Should have static routing, RIP, OSPFv3, VRRPv3 BGP, HSRP, IGMP v1/v2/v3 from Day1 and support for VRF (Virtual routing and forwarding), EIGRP, BGP, PIM and multicast routing as an when required without chnaging the hardware.	
	Shall have 802.1p class of service, marking, classification, policing and shaping. Should support strict priority queuing.	
	Switch should support management features like SSHv2, SNMPv2c, SNMPv3, NTP, RADIUS and TACACS+ .	
	Switch should support port security, DHCP snooping, Dynamic ARP inspection, IP Source guard, BPDU Guard, Spanning tree root guard.	

Switch should support IPv6 Binding Integrity Guard, IPv6 Snooping, IPv6 RA Guard, IPv6 First Hop Security, IPv6 DHCP Guard, IPv6 Neighbor Discovery Inspection and IPv6 Source Guard.	
Should support 802.1x authentication and accounting, IPv4 and IPv6 ACLs and Dynamic VLAN assignment.	
Eight egress queues per port for different types of traffic across the stack. Should support 2000 or more aggregate policers per switch	
Switch shall support application visibility and traffic monitoring with minimum 40 K sflow/jflow/netFlow entries.	
Switch shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.	
Switch shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.	
Switch / Switch's Operating System should be tested and certifiedfor EAL 2/NDPP or above under Common Criteria Certification.	
Switch should be IPv6 Certified/IPv6 logo ready.	

Minimum Specification		Line item Qty.	Specification (Quoted / Applicable – by the bidder)	Complied (Yes / No)
Part No.	Description			
C1-WS3650-48PS/K9	Cisco One Catalyst 3650 48 Port PoE 4x1G Uplink	19		
CON-SNT-CW36548P	SNTC-8X5XNBD Cisco One Catalyst 3650 Port PoE 4x1G for 36 months	19		
S3650UK9-163	UNIVERSAL	19		
PWR-C2-640WAC	640W AC Config 2 Power Supply	19		
CAB-TA-IN	India AC Type A Power Cable	19		
STACK-T2-BLANK	Type 2 Stacking Blank	19		
PWR-C2-BLANK	Config 2 Power Supply Blank	19		
DNA-VOUCHER	Tracker Eligibility SKU for DNA Offers	19		
C1FPCAT36502K9	Cisco One Foundation Perpetual - Catalyst 3650 48-port	19		
CON-ECMU-C1FC3652	SWSS UPGRADES C1 FND Perpetual-Catalyst 3650 48-port for 36 months	19		
C3650-48-L-S	C3650-48 LAN Base to IP Base Paper RTU License	19		
C1-PI-LFAS-2K3K-K9	Cisco ONE PI Device License for LF & AS for Cat 2k, 3k	19		
C1-ISE-BASE-48P	Cisco ONE Identity Services Engine 50 EndPoint Base Lic	19		
C1F1VCAT36502-03	Tracker PID v03 Fnd Perpetual CAT36502 - no delivery	19		
CON-ECMU-C1FC3652	SWSS UPGRADES C1 FND Perpetual-Catalyst 3650 48-port for 36 months	19		
DHQ SMD Module				
GLC-LH-SMD=	1000BASE-LX/LH SFP transceiver module, MMF/SMF, 1310nm, DOM	38		

15. Minimum Specification of VC End-point

Qty.	10 Nos.
Make	Polycom Group 500 Series or Equivalent solution matching the below specs and requirement
Model	
Part No.	

Existing End-point Specification

Video Standards and Resolutions	Support for H.323, SIP standards for communications.
	Support for H.261, H.263, H.264 AVC/ SVC, H.264 High Profile
	Support for 1080p 60 fps, 1080p 30 fps, 720p 60 fps and 720p 30fps
Content Standards and Resolutions	supports content sharing using standard based H.239 and BFCP over SIP. Also support audio from PC used for content sharing.
	transmits both people and content both simultaneously to the far end location at 1080p 30fps
Audio Standards and Features	supports G.711, G.728, G.729A, G.722, G.722.1, AAC-LD or better
	Support for 20kHz or better bandwidth with crystal clear audio and stereo sound.

Minimum Technical Specification for VC end point

1	Video Standards	H.263 or better
		H.264 in an Encrypted call should be possible
		H.264 should be possible when sending or receiving two live video sources e.g. Presenter and Presentation.
2	Video Frame Rate	Should support 30 fps & 60fps (frames per second) with 1080p resolution from day one
3	Video Features	Ability to send and receive two live simultaneous video sources in a single call, so that the image from the main camera and PC or document camera can be seen simultaneously.
		Should support H.239 and BFCP protocols with 1080p resolution
4	Video Output	Should have at least 2 HDMI / DVI (High Definition Multimedia Interface) output to connect Full High Definition display devices such as LCD / LED and projectors for both Video and Content. (Dual Monitor Support)
		It should be possible to display the main video on one HD screen and the presentation / dual video on the other HD screen.
5	Video Input	Should have at least one HD video Input to connect HD camera with full functionalities as mentioned in the camera specifications.
		Should have DVI (Digital Video Interface)/HDMI input to connect PC / Laptop directly to the Video conferencing system and display resolutions 1080p along with PC Audio.
6	Audio	
7	Audio standards supported	G.711, G.722, G.722.1, 64 kbps MPEG-4 AAC-LD or equivalent standards must be supported.
8	Other Desirable features	Noise Reduction, Automatic Gain control, Acoustic Echo Canceller, Active Lip synchronization
9	Audio Inputs	Should support minimum 2 Microphone inputs. 2 needs to be supplied from day one with minimum cable length of 20 ft.
		The microphones must be standard based microphones.
		The pickup of the microphones should be at least 10 feet from the microphone.
		Echo Cancellation for every input must be available.
10	Network Interfaces	1 LAN / Ethernet - 10/100/1000 Mbps full duplex
		Should have support for IPV4 and IPV6
11	Bandwidth	IP - at least 6 Mbps
12	Network Capabilities	Packet Loss Based Downspeeding
13	H.323/ IP Features	Differentiated Services(QOS):
		DiffServ
		IP adaptive bandwidth management
		Auto Gatekeeper discovery
		Auto Network Address Translation (NAT) support
		Standards based- Packet Loss Recovery feature on H.323 call

WTL/PAR /STR/17-18/035

		Should support URL Dialing
		Support for H.245 DTMF tones in H.323
14	SIP Features	The endpoints must support SIP in addition to H323 protocol. Calls can be made on SIP or H323 without having to restart or reconfigure the endpoint.
		The endpoint must register with any standard SIP server.
		Must support data sharing capability in SIP calls for dual stream transmit and receive.
15	**Security**	
16	Menu Control	Password protected system menu
17	Encryption of video call	ITU-T standards based Encryption of the video call
		Call should be encrypted end-to-end on IP
		Should support Standards-based: H.235 v3 and AES Encryption via Automatic key generation and exchange. The same should be available in a call with Video with presentation (dual video)
		Ability to manually turn encryption On or OFF should be there.
		Automatic key generation and exchange
18	Camera	CMOS or better
		Minimum of 10X Optical zoom
		1920 x 1080 pixels progressive @ 60fps
		The Camera and codec should be from the same manufacturer. The codec should be supplied with a touch panel for device operations and control.
		Should have at least 70 degrees field of view (horizontal)
19	Directory services	Should support Local and Global directories.
		Should support LDAP and H.350 protocols for directory transfer.
		It should support remote software update using HTTP, HTTPS, secure copy (SCP)
20	Interoperability & Open Standards	VC endpoint must be open standards based and not based on proprietary protocols and should be interoperable with the existing SIP based IPPBX with a single dial plan
		VC endpoint must inter operate from day one using standards based video and audio compression with other open standards based VC endpoints and MCUs from various OEMs. Any additional hardware / software required should be supplied day one.

16. Minimum Specification of LED Display

Qty.	10 Nos.
Make	
Model	
Part No.	

Parameter	Description
Size (diagonally)	48" or above
Panel TECHNOLGY	PVA or equvalent
Type	edge led
resolution	1920x1080 (Full Hd)
aspect ratio	16:09
native contrast ratio	5000:1
brightness	350 nits or more
Response time	8 ms or lesser
Haze	minimum 2% or better
Connectivity	
1.HDMI	2 NOS
2. DVI-I	1 NO

3.VIDEO INPUT	COMPONENT CVBS COMMON
4.Audio in	Stereo Mini Jack, RGB/DVI/HDMI/Component Audio(Common)
5.Audio out	Stereo Mini Jack
power consumtion (w/h)	minimum 60 or lesser
operating temperature	0℃~ 40℃
Humidity	10~80%
special feature	Centralized content management software , temperature sensor , button lock , auto source switching
storage	built in 179MB expandable external storage upto 128 GB through USB/,HDD
Operating System	LINUX ,WINDOWS,ANDROID
certification	UL(USA) :cul6095,FCC(USA) BIS(india) CE(Europe) FCC (USA)
Warranty	3 Years Onsite warranty from OEM from date of purchase / installation , whichever is later

17. Technical Specification of SDHQ Routers

Qty.	65 Nos.
Make	Cisco or equivalewnt
Model	ISR4351-V/K9 or equivalent
Part No.	

Minimum Technical Specification for SDHQ Routers

	SDHQ Router
Sr No	Specifications
	SDHQ Router -- 8 * 2MB Serial interface + 2 Combo LAN/WAN interface
Sr No	Specifications
	The Router should support modular architecture, multi-core Processor, internal field replaceable power supply .The Router Should have capabilities to seamless upgrade/replacement (without interrupting running processes and services) for modular interfaces.
	Router should have 3 x 1G SFP/Base-T combo port and 8 nos of Channelized E1/T1/V.35 ports with v.35 cable from Day 1.
	The Router should support interfaces supported by router like Channelized E1/T1, V.35, G.703, LTE, Gigabit and 10G Ethernet modules to accommodate field upgrades without rebooting the router.
	The Router should have 1 empty slot for future use
	Router should have minimum 6 GB of active DRAM/RAM and 1 GB Flash. Should support expandability option of DRAM and Flash.
	The router must support IKEv1, IKEv2, GRE and IPSEC from day 1. The proposed solution in WBSWAN should serve the GRE encryption for traffic from any location to other location on demandand also should able to create GRE tunnel with existing router at SHQ.
	Router should support 700K IPv4 and IPv6 routes, with 1400 IPSEC tunnel.
	The router should support 350 mbps of IPSEC Bandwdith ,incase required in the future
	Router should support IGMP v1/v2/v3 and PIM multicast routing
	Router should support static Routes, OSPFv2, OSPFv3, BGP4, MBGP, BFD, Policy based routing, IPv4 and IPv6 tunneling
	The Router should support Zone Based Firewall feature or an external appliance for the same functionality can be provided.
	Router should Support Traffic Optimization feature built in the router operating system or an external appliance for the same functionality can be provided.
	Shall have 802.1p class of service and marking, classification, policing and shaping.
	Router should support SSHv2, SNMPv2c, SNMPv3 and NTP
	Routers should support AAA using RADIUS and TACACS+
	Should have extensive support for IP SLA and best path selection for metrics like delay, latency, jitter, packet loss to assure business-critical IP applications from Day1.
	The router should support cRTP to compress voice (RTP) streams
	Router should support monitoring of network traffic with application level insight with deep packet visibility into web traffic, RTP-Based VoIP traffic.

	Router should have traffic load balancing capability on dual WAN Links based on advanced criteria, such as reachability, delay, loss, jitter and bandwidth utilization.
	Router shall have capability to add on demand IPSec VPN tunnels dynamically established multipoint-to-multipoint IPSEC based spoke-to-spoke VPN tunnels matching traffic conditions
	Router shall confirm to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.
	Router shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.
	Router/Router's Operating System should be tested and certified for EAL 3/NDPP or above under Common Criteria Certification
	Router should be IPv6 Certified/IPv6 logo ready
	Voice Features (in case router can handel voice gateway capabilities).
	The router should have call processing backup mechanism that allows IP phones to register to the router
	The system should be provided with the necessary Remote Survivability license for at least 25 IP phones from Day 1 and should be scalable to handle atleast 500 IP phone in Survivable mode.
	The Router should support voice interfaces like PRI, FXO & FXS to accommodate field upgrade
	The Router should have engough voice Signal Processor module to handel required voice traffic.
	Voice Features (in case external appliance provide).
	Should have multi-core Processor, in 1RU platform.
	Should have minimum 2 x 1G Base-T
	Should have minimum 512 MB of DRAM.
	Should have voice have call processing backup mechanism that allows IP phones to register the remote gateway
	Should be scalable to handle at least 100 IP phone in Survivable mode
	Should support voice interfaces like PRI, FXO & FXS to accommodate field upgrade (without interrupting running processes and services)
	It should support embedded hardware encryption acceleration, voice capable digital signal processor (DSP) slots or equivalent feature
	It should support minimum 256 DSP resources
	In Survivable mode user should able to see Caller ID in respective phone display

Minimum Specification		Line item Qty.	Specification (Quoted / Applicable – by the bidder)	Complied (Yes / No)
Part No.	**Description**			
C1-CISCO4351/K9	Cisco ONE ISR 4351 (3GE,3NIM,2SM,4G FLASH,4G DRAM,IPB)	65		
CON-SNT-C14351K9	SNTC-8X5XNBD C1 ISR 4351 (3GE,3NIM,2SM,4G FLASH) for 36 months	65		
C1-SL-750-AKC	Cisco ONE Promo LIC Akamai Connect for 750 connection WAAS	65		
SL-4350-IPB-K9	IP Base License for Cisco ISR 4350 Series	65		
CAB-SS-V35MT	V.35 Cable, DTE Male to Smart Serial, 10 Feet	520		
NIM-4T	4-Port Serial WAN Interface card	130		
GLC-LH-SMD	1000BASE-LX/LH SFP transceiver module, MMF/SMF, 1310nm, DOM	130		
PWR-4450-AC	AC Power Supply for Cisco ISR 4450 and ISR4350	65		
CAB-ACSA	AC Power Cord (South Africa), C13, BS 546, 1.8m	65		
MEM-FLSH-8G	8G eUSB Flash Memory for Cisco ISR 4430	65		
POE-COVER-4450	Cover for empty POE slot on Cisco ISR 4450	65		
MEM-4300-8G	8G DRAM (4G+4G) for Cisco ISR 4330, 4350,	65		
NIM-BLANK	Blank faceplate for NIM slot on Cisco ISR 4400	65		
SM-S-BLANK	Removable faceplate for SM slot on Cisco 2900,3900,4400 ISR	130		

WTL/PAR /STR/17-18/035

PVDM4-64	64-channel DSP module	65		
C1F1PISR4350SK9	Cisco ONE Foundation Perpetual License ISR 4351	65		
CON-ECMU-C1F4350S	SWSS UPGRADES C1 Foundation Perpetual Lic ISR 4351 for 36 months	65		
SL-4350-SEC-K9	Security License for Cisco ISR 4350 Series	65		
SL-4350-APP-K9	AppX License for Cisco ISR 4350 Series	65		
ISRWAAS-RTU-750	ISRWAAS 750 conns RTU for ISR4300 series	65		
CON-ECMU-ISRW750	SWSS UPGRADES ISRWAAS 750 conns RT for 36 months	65		
VWAAS-RTU-750	VWAAS 750 conns RTU for UCS-E on single ISR only	65		
C1-PI-LFAS-ISR-K9	Cisco ONE PI Device License for LF, AS, & IWAN App for ISR	65		
C1-LIC-VCM-1N	Cisco ONE Promo license to manage one WAAS node	65		
C1AUPISR4350SK9	Cisco ONE Advanced UC Perpetual License ISR 4351	65		
CON-ECMU-C1A4350S	SWSS UPGRADES C1 Advanced UC Perpetual Lic ISR 4351 for 36 months	65		
SL-4350-UC-K9	Unified Communication License for Cisco ISR 4350 Series	65		
FL-CME-SRST-25	SRST-25 Seat License (CME uses CUCME Phone License ONLY)	65		
FL-CUBEE-25	Unified Border Element Enterprise License - 25 sessions	65		
C1A1VISR4350S-01	Tracker PID v01 Adv Perpetual ISR4350S - no delivery	65		
SISR4300UK9-165	Cisco ISR 4300 Series IOS XE Universal	65		

18. Technical Specification of SDHQ L2 Switches

Qty.	65 Nos.
Make	Cisco or equivalewnt
Model	SG350-28P-K9-EU or equivalent
Part No.	

Minimum Technical Specification for SDHQ Switches

	SDHQ L2 Switch	
Sr No	**Specifications**	**Compliance (Yes/No)**
	SDHQ - POE - 24 Port (PoE)	
Sr No	**Specifications**	
	Switch should be 1RU with minimum 24 nos. 10/100/1000 Base-T POE+ ports and minimum 195W of PoE Power and additional 2 nos. of 1G SFP port + 2 nos. of 1G SFP/RJ-45 combo uplinks ports.	
	Switch should have internal power supply.	
	Switch shall have minimum 56 Gbps of switching fabric and 41 Mpps of forwarding rate.	
	Shall have minimum 250 active Vlans. Up to 16K MAC address	
	1K multicast groups, static routes, DHCP options	
	Should support IEEE Standards of Ethernet: IEEE 802.1D, 802.1s, 802.1w, 802.3az, 802.1x, 802.3ad, 802.3x, 802.1p, 802.1Q, 802.3, 802.3u, 802.3ab, 802.3z.	
	Shall have 802.1p class of service, marking, classification, policing and shaping. Should support strict priority queuing. 8 hardware queues priority levels	
	Switch should support management features like SNMPv2c, SNMPv3, NTP, RADIUS and TACACS+ .	
	Switch should support port security, DHCP snooping, Dynamic ARP inspection, IP Source guard, Spanning tree.	

WTL/PAR /STR/17-18/035

IPv6 First Hop Security including RA guard, ND inspection & DHCPv6 guard. MLD v1/2 snooping	
Management via RMON, CLI & GUI	
Switch should have UL 60950, CSA, CE mark, IPv6 Gold Logo certified	

Minimum Specification		Line item Qty.	Specification (Quoted / Applicable – by the bidder)	Complied (Yes / No)
Part No.	Description			
SG350-28P-K9-EU	Cisco SG350-28P 28-port Gigabit POE Managed Switch	65		
CAB-ACSA	AC Power Cord (South Africa), C13, BS 546, 1.8m	65		
CON-SNT-SG3502G3	SNTC-8X5XNBD Cisco SG350-28P 28-p for 36 months	65		

19. Technical Specification of BHQ Routers

Qty.	341 Nos.
Make	Cisco or equivalewnt
Model	ISR4331-V/K9 or equivalent
Part No.	

Minimum Technical Specification for BHQ Routers

	BHQ Router
Sr No	Specifications
	BHQ Router -- 4 * 2MB Serial interface + 2 Combo LAN/WAN interface
Sr No	Specifications
	The Router should support modular architecture, multi-core Processor, internal field replaceable power supply .The Router Should have capabilities to seamless upgrade/replacement (without interrupting running processes and services) for modular interfaces.
	Router should have 2 x 1G SFP/Base-T (combo or dedicated) port and 4 nos of V.35 ports with v.35 cable from Day 1.
	The Router should support interfaces supported by router like Channelized E1/T1, V.35, G.703, LTE, Gigabit and 10G Ethernet modules to accommodate field upgrades without rebooting the router.
	The Router should have 2 empty slot for future use
	Router should have minimum 4 GB of active DRAM/RAM and 1 GB Flash. Should support expandability option of DRAM and Flash.
	The router must support IKEv1, IKEv2, GRE and IPSEC from day 1. The proposed solution in WBSWAN should serve the GRE encryption for traffic from any location to other location on demandand also should able to create GRE tunnel with existing router at SHQ.
	Router should support 600K IPv4 and IPv6 routes, with 1000 Ipsec tunnel.
	The router should support 270 mbps of IPSEC Bandwdith ,incase required in the future
	Router should support IGMP v1/v2/v3 and PIM multicast routing
	Router should support static Routes, OSPFv2, OSPFv3, BGP4, MBGP, BFD, Policy based routing, IPv4 and IPv6 tunneling
	The Router should support Zone Based Firewall feature or an external appliance for the same functionality can be provided.
	Router should Support Traffic Optimization feature built in the router operating system or an external appliance for the same functionality can be provided.
	Shall have 802.1p class of service and marking, classification, policing and shaping.
	Router should support SSHv2, SNMPv2c, SNMPv3 and NTP
	Routers should support AAA using RADIUS and TACACS+
	Should have extensive support for IP SLA and best path selection for metrics like delay, latency, jitter, packet

	loss to assure business-critical IP applications from Day1.
	The router should support cRTP to compress voice (RTP) streams
	Router should support monitoring of network traffic with application level insight with deep packet visibility into web traffic, RTP-Based VoIP traffic.
	Router should have traffic load balancing capability on dual WAN Links based on based on advanced criteria, such as reachability, delay, loss, jitter and bandwidth utilization.
	Router shall have capability to add on demand IPSec VPN tunnels dynamically established multipoint-to-multipoint IPSEC based spoke-to-spoke VPN tunnels matching traffic conditions
	Router shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.
	Router shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.
	Router/Router's Operating System should be tested and certified for EAL 3/NDPP or above under Common Criteria Certification
	Router should be IPv6 Certified/IPv6 logo ready
	Voice Features (in case router can handel voice gateway capabilities).
	The router should have call processing backup mechanism that allows IP phones to register to the router
	The system should be provided with the necessary Remote Survivability license for at least 25 IP phones from Day 1 and should be scalable to handle atleast 100 IP phone in Survivable mode.
	The Router should support voice interfaces like PRI, FXO & FXS to accommodate field upgrade
	The Router should have engough voice Signal Processor module to handel required voice traffic.
	Voice Features (in case external appliance provide).
	Should have multi-core Processor, in 1RU platform.
	Should have minimum 2 x 1G Base-T
	Should have minimum 512 MB of DRAM.
	Should have voice have call processing backup mechanism that allows IP phones to register the remote gateway
	Should be scalable to handel atleast 100 IP phone in Survivable mode
	Should support voice interfaces like PRI, FXO & FXS to accommodate field upgrade (without interrupting running processes and services)
	It should support embedded hardware encryption acceleration, voice capable digital signal processor (DSP) slots or equivalent feature
	It should support minimum 256 DSP resources
	In Survivable mode user should able to see Caller ID in respective phone display

Minimum Specification		Line item Qty.	Specification (Quoted / Applicable – by the bidder)	Complied (Yes / No)
Part No.	Description			
C1-CISCO4331/K9	Cisco ONE ISR 4331 (3GE,2NIM,1SM,4G FLASH,4G DRAM,IPB)	341		
CON-SNT-C14331K9	SNTC-8X5XNBD C1 ISR 4331 (2GE,2NIM,1SM,4G FLASH)	341		
C1-SL-750-AKC	Cisco ONE Promo LIC Akamai Connect for 750 connection WAAS	341		
SL-4330-IPB-K9	IP Base License for Cisco ISR 4330 Series	341		
CAB-SS-V35MT	V.35 Cable, DTE Male to Smart Serial, 10 Feet	1364		
NIM-4T	4-Port Serial WAN Interface card	341		
GLC-LH-SMD	1000BASE-LX/LH SFP transceiver module, MMF/SMF, 1310nm, DOM	341		
PWR-4330-AC	AC Power Supply for Cisco ISR 4330	341		
CAB-ACSA	AC Power Cord (South Africa), C13, BS 546, 1.8m	341		
MEM-FLSH-8G	8G eUSB Flash Memory for Cisco ISR 4430	341		
PVDM4-32	32-channel DSP module	341		

MEM-4300-8G	8G DRAM (4G+4G) for Cisco ISR 4330, 4350,	341		
NIM-BLANK	Blank faceplate for NIM slot on Cisco ISR 4400	341		
SM-S-BLANK	Removable faceplate for SM slot on Cisco 2900,3900,4400 ISR	341		
C1F1PISR4330SK9	Cisco ONE Foundation Perpetual License ISR 4331	341		
CON-ECMU-C1F4330S	SWSS UPGRADES C1 Foundation Perpetual Lic ISR 4331	341		
SL-4330-SEC-K9	Security License for Cisco ISR 4330 Series	341		
SL-4330-APP-K9	AppX License for Cisco ISR 4330 Series	341		
ISRWAAS-RTU-750	ISRWAAS 750 conns RTU for ISR4300 series	341		
CON-ECMU-ISRW750	SWSS UPGRADES ISRWAAS 750 conns RT	341		
VWAAS-RTU-750	VWAAS 750 conns RTU for UCS-E on single ISR only	341		
C1-PI-LFAS-ISR-K9	Cisco ONE PI Device License for LF, AS, & IWAN App for ISR	341		
C1-LIC-VCM-1N	Cisco ONE Promo license to manage one WAAS node	341		
C1F1VISR4330S-04	Tracker PID v04 Fnd Perpetual ISR4330S - no delivery	341		
C1AUPISR4330SK9	Cisco ONE Advanced UC Perpetual License ISR 4331	341		
CON-ECMU-C1A4330S	SWSS UPGRADES C1 Advanced UC Perpetual Lic ISR 4331	341		
SL-4330-UC-K9	Unified Communication License for Cisco ISR 4330 Series	341		
FL-CME-SRST-25	SRST-25 Seat License (CME uses CUCME Phone License ONLY)	341		
FL-CUBEE-5	Unified Border Element Enterprise License - 5 sessions	682		
C1A1VISR4330S-01	Tracker PID v01 Adv Perpetual ISR4330S - no delivery	341		
SISR4300UK9-164	Cisco ISR 4300 Series IOS XE Universal	341		
FL-4330-PERF-K9	Performance on Demand License for 4330 Series	10		

20. Technical Specification of BHQ L2 Switches

Qty.	**341 Nos.**
Make	**Cisco or equivalewnt**
Model	**SG350-28P-K9-EU or equivalent**
Part No.	

Minimum Technical Specification for BHQ Switches

	BHQ L2 Switch	
Sr No	**Specifications**	**Compliance (Yes/No)**
	BHQ - POE - 24 Port (PoE)	
Sr No	**Specifications**	
	Switch should be 1RU with minimum 24 nos. 10/100/1000 Base-T POE+ ports and minimum 195W of PoE Power and additional 2 nos. of 1G SFP port + 2 nos. of 1G SFP/RJ-45 combo uplinks ports.	
	Switch should have internal power supply.	
	Switch shall have minimum 56 Gbps of switching fabric and 41 Mpps of forwarding rate.	

WTL/PAR /STR/17-18/035

Shall have minimum 250 active Vlans. Up to 16K MAC address	
1K multicast groups, static routes, DHCP options	
Should support IEEE Standards of Ethernet: IEEE 802.1D, 802.1s, 802.1w, 802.3az, 802.1x, 802.3ad, 802.3x, 802.1p, 802.1Q, 802.3, 802.3u, 802.3ab, 802.3z.	
Shall have 802.1p class of service, marking, classification, policing and shaping. Should support strict priority queuing. 8 hardware queues priority levels	
Switch should support management features like SNMPv2c, SNMPv3, NTP, RADIUS and TACACS+ .	
Switch should support port security, DHCP snooping, Dynamic ARP inspection, IP Source guard, Spanning tree.	
IPv6 First Hop Security including RA guard, ND inspection & DHCPv6 guard. MLD v1/2 snooping	
Management via RMON, CLI & GUI	
Switch should have UL 60950, CSA, CE mark, IPv6 Gold Logo certified	

Minimum Specification		Line item Qty.	Specification (Quoted / Applicable – by the bidder)	Complied (Yes / No)
Part No.	Description			
SG350-28P-K9-EU	Cisco SG350-28P 28-port Gigabit POE Managed Switch	341		
CAB-ACSA	AC Power Cord (South Africa), C13, BS 546, 1.8m	341		
CON-SNT-SG3502G3	SNTC-8X5XNBD Cisco SG350-28P 28-p for 36 months	341		

21. 6 KVA Online UPS (1+1)

Technical Specification of DHQ UPS systems

Qty.	38 Nos.(1+1 mode)
Make	Vertiv or equivalewnt
Model	
Part No.	

In WBSWAN District Head quarters 6 KVA online UPS systems have been installed in parallel redundant mode (MT 6000 – Emerson make) . Each 6 KVA UPS shall be supplied with 20 nos 26Ah battery of make Amara Raja / Exide. As these UPS systems are very old, the same may be replaced by new ones.
The SI shall offer a buyback option for the old UPS systems (without battery).
The scope of this tender is limited by not restricted to the following
Supply of the following at each location (19 locatins @ 2 nos UPS per DHQ)
1. True Online Double Conversion UPS system of 6 kVA Capacity
2. Inbuilt Isolation Transformer of 3 kVA capacity – copper winding
3. Transient Voltage Surge Suppressor 25 kA
4. SNMP Card for 6 kVA UPS system
5. Patch Cable for Connecting the UPS through SNMP to the WBSWAN Internal LAN network

Supply of the following at Moni Bhandar
1. Supply of Centralized Monitoring Software for monitoring the supplied UPS systems on the Internal Server

Service Scope of Work
1. Delivery of the new 6 kVA UPS systems (1+1) with all accessories at the respective location mentioned in Purchase Order
2. Dismantling of the old UPS system at the individual location and buyback of the same.
3. Installation and commission of the new UPS system with all accessories and SNMP Card at the customer site
4. Configuring of the Centralized Monitoring Software to provide updated UPS status on the server and setting the necessary alarms to be forwarded to various people
5. After sales warranty support for 3 years for UPSs and 2 years for batteries.

UPS Technical Specifications For 6kVA

Sl	Parameter	Required Specification	Complied (Yes / No)	Offer Specification
1	UPS Type	True Online Double Conversion		
2.1		220/380Vac Single-phase three-wire/ three- phase- four- wire.		
2.2		Input Frequency Range 45Hz~55Hz		
2.3		Input Voltage Range Single Phase 120Vac-276Vac at 50% load		
2.4	Input Parameters	Input Power Factor > 0.99 at 100% load at nominal voltage		
3.1	Output Parameters	220/230/240 VAC Settable Single Phase		
3.2		Output Frequency Battery Mode 50 Hz +/- 0.1 Hz		
3.3		Output vTHD <= 3% for Linear Load; Pure Sine Wave Output		
3.4		Efficiency >=92% AC to AC		
3.5		Crest Factor 3:1		
4	Display	UPS Should be LED Status Display with the following parameters Input and Output Voltage Battery Bank Voltage Load % UPS Fault Status		
5.1	Battery Parameters	Battery Bank Nominal Voltage should be 192 VDC as the existing battery bank consists of 16 Nos 26AH-12V SMF batteries		
5.2		Minimum Battery Charging Current 6 Amps. Settable as per battery AH		
5.1	Environment	Humidity 20-90% RH @ 0-40˚C (Non Condensing) . Noise level : < 50dB @ 1mtrs.		
6	Remote Communication	UPS must have Rs 232 / USB Interface and also should be provided with an SNMP Card for remotely communicating over the WBSWAN with the Central Server monitoring the UPS systems in the network through the Centralized Monitoring Software		
7	Isolation Transformer	Copper winding 1:1 isolation transformer has to be provided at the Input of the UPS system capacity must be minimum 9 kVA		
8	UPS Configuration	UPS Should be Parallel N+1 Configuration, and output also will be Parallel.		

Surge Protector Device Technical Specification

Sl	Parameter	Required Specification	Complied (Yes / No)	Offer Specification
1	Type	Series Connected **Surge Protector Device** of 25 kA capacity		
2	Connection Point	Input of the UPS system		
3	Response	< 0.25 nano seconds		
4	Fault Current (8/20 Micro Seconds)	25 kA L-N 25 kA N-PE		

22.   2 KVA Online UPS systems

WTL/PAR /STR/17-18/035

WEBEL TECHNOLOGY LIMITED

Technical Specification of SDHQ + BHQ UPS systems

Qty.	65+ 341 Nos.
Make	Vertiv or equivalewnt
Model	
Part No.	

Across the WBSWAN network large no of 2 kVA True Online Double Conversion UPS systems installed at SDHQ and BHQs. These UPS systems are of make Emerson Network Power (India) Pvt Ltd and model UGXT RT 2000 (Long Backup Model).

These UPS systems are nearly over 8-9 years old and have reached their End of Life and this tender aims to replace these UPS systems with new ones. The SI shall offer a buyback option for the old UPS systems (without battery).

Each 2 KVA UPS shall be supplied with 3 nos 26Ah battery of make Amara Raja / Exide

The scope of this tender is limited by not restricted to the following

Supply of the following at each location (65 SDHQ & 341 BHQs)

1. True Online Double Conversion UPS system of 2 kVA Capacity
2. Isolation Transformer of 3 kVA capacity – copper winding
3. Transient Voltage Surge Suppressor 10 kA
4. SNMP Card for 2 kVA UPS system
5. Patch Cable for Connecting the UPS through SNMP to the WBSWAN Internal LAN network

Service Scope of Work

6. Delivery of the new 2 kVA UPS systems with all accessories at the respective location mentioned in Purchase Order
7. Dismantling of the old UPS system at the individual location and buyback of the same.
8. Installation and commission of the new UPS system with all accessories and SNMP Card at the customer site
9. Configuring of the Centralized Monitoring Software to provide updated UPS status on the server and setting the necessary alarms to be forwarded to various people
10. After sales warranty support for 3 years for UPSs and 2 years for batteries.

UPS Technical Specifications

Sl	Parameter	Required Specification	Complied (Yes / No)	Offer Specification
1	UPS Type	True Online Double Conversion		
2.1		Nominal Input Voltage 220/230/240 VAC Single Phase		
2.2		Input Frequency Range 40 ~ 70 Hz		
2.3		Input Voltage Range 110 VAC – 280 VAC at 50% load		
2.4	Input Parameters	Input Power Factor > 0.99 at 100% load at nominal voltage		
3.1	Output Parameters	220/230/240 VAC Settable Single Phase		
3.2		Output Frequency Battery Mode 50 Hz +/- 0.1 Hz		
3.3		Output vTHD <= 3% for Linear Load; Pure Sine Wave Output		
3.4		Efficiency >=88% AC to AC		
3.5		Crest Factor 3:1		
4	Display	UPS Should be LCD Status Display with the following parameters Input and Output Voltage Battery Bank Voltage Load % UPS Fault Status		
5.1	Battery Parameters	Battery Bank Nominal Voltage should be 72 VDC as the existing battery bank consists of 6 Nos 26AH-12V SMF batteries		
5.2		Minimum Battery Charging Current 6 Amps. Settable as per battery AH		
5.1	Environment	Humidity 20-90% RH @ 0-40˚C (Non		

		Condensing) . Noise level : < 50dB @ 1mtrs.		
6	Remote Communication	UPS must have Rs 232 / USB Interface and also should be provided with an SNMP Card for remotely communicating over the WBSWAN with the Central Server monitoring the UPS systems in the network through the Centralized Monitoring Software		
7	Isolation Transformer	Copper winding 1:1 isolation transformer has to be provided at the Input of the UPS system capacity must be minimum 3 kVA		

Transient Voltage Surge Suppressor Technical Specification

Sl	Parameter	Required Specification	Complied (Yes / No)	Offer Specification
1	Type	Series Connected Transient Voltage Surge Suppressor of 10 kA capacity		
2	Connection Point	Input of the UPS system		
3	Response	< 0.5 nano seconds		
4	Fault Current (8/20 Micro Seconds)	10 kA L–N 10 kA N-G		

23. Specifications for Centralized Monitoring Software

The centralized monitoring software installed on the server at Mani Bhandhar will have the following features
1. All UPS systems with SNMP card will be polled by the server and the information for all the UPS systems will be stored on the server
2. At any given point of time the following UPS systems can be easily identified
    a. UPS Running on Mains Power without any problem
    b. UPS Running on Battery Power Without any problem
    c. UPS systems with fault status active
3. Depending on the status of the UPS system it should be possible to send mails via SMTP to different concerned people on the network. Provision for SMS alerts should also be present.
4. A consolidated report about the total UPS performance in a time interval should be available from the server.
5. The centralized Monitoring software should be able to support up to 500 UPS Systems minimum

Desktop Computers

24. Technical Specification of Desktop PCs with Accessories

Qty.	19+ 65+ 341 Nos.
Make	
Model	
Part No.	

Minimum Specification for Desktop PCs

Sl.	Parameter	Required Specification	Complied (Yes / No)	Offer Specification
	Processor	Intel Core i5-7500 Processor (base frequency of 3.4 GHZ or Higher with 6 MB cache)		
	Chipset	Compatible Chipset with BIOS modification/up gradation feature.		
	Motherboard	Motherboard make from the same Desktop OEM .OEM logo embossed on the motherboard (No Sticker)		
	Memory	Minimum 4 GB 2400 MHz DDR4		
	Expandable to	Memory Expandable up to minimum 32 GB DDR4-2400 MHz with 2 DIMM slots		
	Hard Disk	1000 GB 3.5 inch Serial ATA (7,200 Rpm) Hard Drive		
	Monitor	19.5 inches or higher with Resolution of		

WTL/PAR /STR/17-18/035

		1600 x 900 or Higher, minimum Color depth - 16.9 million colors, Panel type - IPS with LED Backlight.		
		Connectors/ Ports : Display Port , HDMI , VGA, USB . Monitor capable of Height, Tilt, Pivot and Swivel adjustment option. (Same OEM make of Desktop)		
	Ethernet	Integrated Gigabit (10/100/1000) Ethernet port		
	Mouse	2 Button USB Optical Scroll Mouse (Same OEM make/brand as system)		
	Keyboard	104 Keys USB keyboard (Same OEM make/brand as system)		
	Optical Drive	Internal DVD R/W Drive		
	Graphics	Integrated HD Graphics		
	Audio	Internal audio connector with Internal audio Speaker		
	I/O Ports	Minimum 8 USB (at least 4 USB V3.0)		
		1 Ethernet (RJ45)		
		1 VGA , 1 x Display Port		
		1 Stereo line in/out or universal audio port		
		HDMI 1 port		
	Expansion Slots	Minimum 1 full height PCIe x16 , 3 full height PCIe and 1x M.2		
		USB & Network Enable/Disable Port Control		
		Power-On Password		
	Chassis	Tool less chassis with security lock option to lock both PC and Monitor. Trusted Platform Module (TPM) 1.2 or Higher with 4KB on chipset, Chassis with Chassis Intrusion Switch. Chassis volume not more than 15 liters.		
	Power Supply	Minimum 230 Watt with min 92% or higher energy efficient power supply.		
	Bays	Minimum 1 internal 3.5" and 1 external 5.25"		
	Operating System & Media	Windows 10 Professional 64 Bit. The Quoted model Hardware Drivers must be available in OEM website for easy download. Latest Service Pack Preloaded License, OEM Media in form of DVD/CD containing OS and drivers, OS Recovery Media must be provided.		
	OS Certifications	Windows 10 Professional and Linux Certification (except Neokylin and Bosch Linux)		
	Operating System & Media	Windows 10 Professional 64 Bit. The Quoted model Hardware Drivers must be available in OEM website for easy download. Latest Service Pack Preloaded License, OEM Media in form of DVD/CD containing OS and drivers, OS Recovery Media must be provided.		
	OS Certifications	Windows 10 Professional and Linux Certification (except Neokylin and Bosch Linux)		
	Compliance/ Certification	For OEM: ISO 9001 and 14001.For quoted model : UL,FCC ,EPEAT GOLD & ENERGY STAR 6.0		

WTL/PAR /STR/17-18/035

WEBEL TECHNOLOGY LIMITED

Serial No.	**Desktop Accessories**	Qty.	Offered Specification	Complied (Yes / No)
	Description			
1	Logitech/ equivalent External Web Camera+ I-ball / Microphone Microphone+ Logitech / equivalent External Speakers.	**450**		

Authorized Signatory (Signature In full): _____

Name and title of Signatory: _____

Stamp of the Company: _____

WTL/PAR /STR/17-18/035

WEBEL TECHNOLOGY LIMITED

SECTION – J

DETAILS OF ORDERS EXECUTED BY BIDDER

(Tender No. WTL/PAR/STR/17-18/035)

Sl. No.	Order No.	Order Date	Order Value	Brief description of items and job details	Completed (Yes/NO)	Name of the Customer	Contact details of the Customer

Authorized Signatory (Signature In full): _____

Name and title of Signatory: _____

Stamp of the Company: _____

WTL/PAR /STR/17-18/035

WEBEL TECHNOLOGY LIMITED

SECTION – K

FINANCIAL CAPABILITY OF BIDDER

(Tender No. WTL/PAR/STR/17-18/03%)

FINANCIAL INFORMATION

Sl. No.	Name of the Bidder	Turnover (Rs. / Crores)		
		2014-15	2015-16	2016-17
1				

Authorized Signatory (Signature In full): _____

Name and title of Signatory: _____

Stamp of the Company: _____

Note:
Submit the audited financial statement/ audited annual report of the last three financial years.

WEBEL TECHNOLOGY LIMITED

SECTION – L

BIDDERS'S DETAILS
(Tender No. WTL/PAR/STR/17-18/035)

1	Name of the Firm	
2	Registered Office Address	
	Contact Number	
	Fax Number	
	E-mail	
3	Correspondence / Contact address	
	Name & Designation of Contact person	
	Address	
	Contact Number	
	Fax Number	
	E-mail	
4	Is the firm a registered company? If yes, submit documentary proof	
	Year and Place of the establishment of the company	
6	Former name of the company, if any	
7	Is the firm ▪ a Government/ Public Sector Undertaking ▪ a propriety firm ▪ a partnership firm (if yes, give partnership deed) ▪ a limited company or limited corporation ▪ a member of a group of companies, (if yes, give ▪ name and address and description of other companies) ▪ a subsidiary of a large corporation (if yes give the name and address of the parent organization). If the company is subsidiary, state what involvement if any, will the parent company have in the project.	
8	Is the firm registered with Sales Tax department? If yes, submit valid VAT Registration certificate.	
9	Is the firm registered for Service Tax with Central Excise Department (Service Tax Cell)? If yes, submit valid Service Tax registration certificate.	
10	Total number of employees. Attach the organizational chart showing the structure of the organization.	
11	Are you registered with any Government/ Department/ Public Sector Undertaking (if yes, give details)	
12	How many years has your organization been in business under your present name? What were your fields when you established your organization	
13	What type best describes your firm? (Purchaser reserves the right to verify the claims if necessary) ▪ Manufacturer ▪ Supplier ▪ System Integrator ▪ Consultant ▪ Service Provider (Pl. specify details) ▪ Software Development ▪ Total Solution provider (Design, Supply , Integration, O&M) ▪ IT Company	

14	Number of Offices in district head quarters in West Bengal	
15	Is your organization has ISO 9001:2008 certificates?	
16	List the major clients with whom your organization has been / is currently associated.	
17	Have you in any capacity not completed any work awarded to you? (If so, give the name of project and reason for not completing the work)	
18	Have you ever been denied tendering facilities by any Government / Department / Public sector Undertaking? (Give details)	

Authorized Signatory (Signature In full): _____

Name and title of Signatory: _____

Company Rubber Stamp: _____

WEBEL TECHNOLOGY LIMITED

SECTION – M

PRE-BID MEETING QUERY
(Tender No. WTL/PAR/STR/17-18/03%)

Name of the Bidder:

Queries

Sl. No.	Section No.	Clause No.	Page No.	Queries

Note: The filled form to be submitted in XLS or PDF Format. There is a cut off date for receiving of queries before Pre Bid Meeting. Queries received after the cutoff period will not be accepted. The Purchaser reserves the right to respond all queries over e-mail.

Authorized Signatory (Signature In full): _____

Name and title of Signatory: _____

Company Rubber Stamp: _____

WTL/PAR /STR/17-18/035

WEBEL TECHNOLOGY LIMITED

SECTION - N

SUPPORT SERVICE CENTER & MANPOWER DETAILS OF BIDDER
(Tender No. WTL/PAR/STR/17-18/035)

Sl. No.	Name of Place	Address	Name of Support Personnel	Contact Number

Authorized Signatory (Signature In full): _____

Name and title of Signatory: _____

Company Rubber Stamp: _____

WEBEL TECHNOLOGY LIMITED

SECTION – O

LIST OF CLIENTS OF SIMILAR ORDERS
(Tender No. WTL/PAR/STR/17-18/035)

Sl. No.	Name of the Client	Address	Contact Person	Designation	Contact Numbers

Authorized Signatory (Signature In full): _____

Name and title of Signatory: _____

Company Rubber Stamp: _____

WTL/PAR /STR/17-18/035

WEBEL TECHNOLOGY LIMITED

SECTION – P

MANUFACTURER'S AUTHORIZATION FORM

Date:

To
Webel Technology limited
Plot-5, Block-BP, Sector-V
Salt Lake
Kolkata-700 091

Ref: Tender No.: WTL/PAR/STR/17-18/035 dated 15.01.2018

WHEREAS _____ who are official producers of
_____ and having production facilities at
_____ do hereby authorize
_____ located at
_____ (hereinafter, the "Bidder") to submit a bid of the following
Products produced by us, for the Supply Requirements associated with the above Invitation for Bids.

When resold by _____, these products are subject to our applicable standard end user
warranty terms.

We assure you that in the event of _____, not being able to fulfill its obligation as our Service
Provider in respect of our standard Warranty Terms we would continue to meet our Warranty Terms through alternate
arrangements.

We also confirm that _____is our authorized service provider/system integrator and can
hence provide maintenance and upgrade support for our products.

We also confirm that the products quoted are on our current product list and are not likely to be discontinued with in
from the day of this letter. We assure availability of spares for the products for the next two years after warranty period.

We also confirm that the material will be delivered within 60 days from the date of placement of confirmed order.

Name   In the capacity of

Signed

Duly authorized to sign the authorization for and on behalf of _____

Dated on _____ day of_____

Note: This letter of authority must be on the letterhead of the Manufacturer and duly signed by an authorized signatory.

WEBEL TECHNOLOGY LIMITED

SECTION – Q

PROFORMA FOR PERFORMANCE BANK GUARANTEE

(On non-judicial stamp paper of appropriate value to be purchased in the name of executing Bank)

PROFORMA OF BANK GUARANTEE FOR SECURITY DEPOSIT –CUM-PRFORMANCE
GUARANTEE

Ref …………………….. Bank Guarantee no…………….

Date…………………..

PROFORMA OF BG FOR SECURITY DEPOSIT

KNOW ALL MEN BY THESE PRESENTS that in consideration of WEBEL TECHNOLOGY LIMTED, a Government of West Bengal Undertaking incorporated under the Companies Act, 1956 having its Registered office at Webel Bhavan, Block EP&GP, Sector V, Kolkata-700 091 (hereinafter called "The Purchaser") having agreed to accept from _____(hereinafter called "The Contractor") Having its Head Office at _____, a Bank guarantee for Rs. _____ in lieu of Cash Security Deposit for the due fulfillment by the Contractor of the terms & conditions of the Work Order No. _____dated_____ issued by the Purchaser for _____(hereinafter called "the said work order _____ _____dated_____)". We _____ (Name & detailed address of the branch) (hereinafter called "the Guarantor") do hereby undertake to indemnify and keep indemnified the Purchaser to the extent of Rs._____ (Rupees _____ _____) only against any loss or damage caused to or suffered by the Purchaser by reason of any breach by the Contractor of any of the terms and conditions contained in the said Work Order No. _____ dated_____ of which breach the opinion of the Purchaser shall be final and conclusive.

(2) AND WE, _____DO HEREBY Guarantee and undertake to pay forthwith on demand to the Purchaser such sum not exceeding the said sum of _____Rupees_____) only as may be specified in such demand, in the event of the Contractor failing or neglecting to execute fully efficiently and satisfactorily the order for _____ _____ Work Order no. , _____dated _____

(3) WE _____ 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 order as laid down in the said Work Order No. _____ dated _____ including the warranty obligations and that it shall continue to be enforceable till all the dues of the Purchaser under or by virtue of the said Work Order No. _____ dated _____ have been fully paid and its claims satisfied or is charged or till the Purchaser or its authorized representative certified that the terms and conditions of the said Work Order No. _____ dated _____ have been fully and properly carried out by the said contractor and accordingly discharged the guarantee.

(4) We _____ the Guarantor undertake to extend the validity of Bank Guarantee at the request of the contractor for further period of periods from time to time beyond its present validity period failing which we shall pay the Purchaser the amount of Guarantee.

(5) The liability under the Guarantee is restricted to Rs. _____ (Rupees _____ _____) only and will expire on _____ and unless a claim in writing is presented to us or an action or suit to enforce the claim is filled against us within 6 months from _____ all your rights will be forfeited and we shall be relieved of and discharged from all our liabilities (thereinafter)

(6) The Guarantee herein contained shall not be determined or affected by liquidation or winding up or insolvency or closer of the Contractor.

WEBEL TECHNOLOGY LIMITED

(7) The executants has the power to issue this guarantee on behalf of Guarantor and holds full and valid power of Attorney granted in his favour by the Guarantor authorizing him to execute the Guarantee.

(8) Notwithstanding anything contained herein above, our liability under this guarantee is restricted to Rs. _____ (Rupees _____) only and our guarantee shall remain in force up to _____ and unless a demand or claim under the guarantee is made on us in writing on or before _____ all your rights under the guarantee shall be forfeited and we shall be relieved and discharged from all liabilities there under.

WE, _____ lastly undertake not to revoke this guarantee during the currency except with the previous consent of the Purchaser in writing. In witness whereof we _____have set and subscribed our hand on this _____ day of _____.

SIGNED, SEALED AND DELIVERED

_____
(Stamp of the executants)

WITNESS

1) _____

2) _____
(Name & address in full with Rubber Stamp)

WTL/PAR /STR/17-18/035

WEBEL TECHNOLOGY LIMITED

INSTRUCTIONS FOR FURNISHING BANK GUARANTEE

1. Bank Guarantee (B.G.) for Advance payment, Mobilization Advance, B.G. for security Deposit-cum-Performance Guarantee, Earnest Money should be executed on the Non- Judicial Stamp paper of the applicable value and to be purchased in the name of the Bank.
2. The Executor (Bank authorities) may mention the Power of Attorney No. and date of execution in his/her favour with authorization to sign the documents. The Power of Attorney is to be witnessed by two persons mentioning their full name and address.
3. The B.G. should be executed by a Nationalised Bank/ Scheduled Commercial Bank preferably on a branch located in Kolkata. B.G. from Co-operative Bank / Rural Banks is not acceptable.
4. A Confirmation Letter of the concerned Bank must be furnished as a proof of genuineness of the Guarantee issued by them.
5. Any B.G. if executed on Non-Judicial Stamp paper after 6 (six) months of the purchase of such stamp shall be treated as Non-valid.
6. Each page of the B.G. must bear signature and seal of the Bank and B.G. Number.
7. The content of the B.G. shall be strictly as Proforma prescribed by WTL in line with Purchase Order /LOI/ Work Order etc. and must contain all factual details.
8. Any correction, deletion etc. in the B.G. should be authenticated by the Bank Officials signing the B.G.
9. In case of extension of a Contract the validity of the B.G. must be extended accordingly.
10. B.G. must be furnished within the stipulated period as mentioned in Purchase Order / LOI / Work Order etc.
11. Issuing Bank / The Bidder are requested to mention the Purchase Order / Contract / Work Order reference along with the B.G. No. For making any future queries to WTL.

WEBEL TECHNOLOGY LIMITED

SECTION – R

NIT DECLARATION

(Bidders are requested to furnish the Format given in this section, filling the entire Blank and to be submitted on Bidder's Letter Head)

To
Webel Technology Limited
Plot – 5, Block – BP, Sector -
V, Salt Lake City,
Kolkata – 700091.

Sub: Implementation of WBSWAN Technology Refresh.

Dear Sir,

We the undersigned bidder/(s) declare that we have read and examined in details the specifications and other documents of the subject tender no. WTL/PAR/STR/17-18/035 dated 15.01.2018 for Implementation of WBSWAN Technology Refresh published by Webel Technology Limited in e-Tender website.

We further declare that we have agreed and accepted all the clauses / sub-clauses / formats / terms & conditions other requirements related to the said tender and we will abide by the same as mentioned in the tender document while participating and executing the said tender.

Thanking you, we remain

Yours faithfully

……………………………………………
Signature

…………………………………………………..
Name in full

…………………………………………………..
Designation

…………………………………………………..
Company Stamp

Dated, this …………………..day of ………………2018

WEBEL TECHNOLOGY LIMITED

SECTION – S

LIST OF LOCATIONS

- **State Head Quarter at Moni Bhandar, Webel Bhavan ,Kolkata**
- **All District Head Quarters (except Alipurduar, Paschim Bardhaman, Jhargram and Kalimpong)**
- **All Sub Divisional head Quarters**
- **All Block Head quarters**

Details of contact persons with physical address will be shared with L1bidder

WTL/PAR /STR/17-18/035