**Advertisement No: RGSC/EOI/2020-21/01**                     **Dated:   29.10.2020**

# RFP

**For**

**Project**

# Campus Wide Network Setup along with dedicated redundant ISP Lease lines (Synchronous 1:1) and its operation and maintenance at RGSC Campus



**Issued On:**

**RAJIV GANDHI SOUTH CAMPUS**
**BANARAS HINDU UNIVERSITY**
**VARANASI-221005, INDIA**

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# Important Information

The RFP document can be downloaded from CPP portal (https://eprocure.gov.in/eprocure/app) and the same is also available onthe University website (www.bhu.ac.in).

Interested firms are requested to submit RFP online and also send their RFP in sealed envelope superscripted with "**Campus Wide Network Setup along with dedicated redundant ISP Lease lines (Synchronous 1:1) and its operation and maintenance at RGSC Campus**" by post or handed over to the Office of the Assistant Registrar (RGSC), Barkachha, Mirzapur on or before 07/12/2020 by 03:00 PM.

The presentation will be held in Committee Room 2, Central Office, BHU or in Committee Room, Computer Centre, BHU, Varanasi, UP.

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|---|---|
| **Publishing Date** | 29/10/2020 |
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| **Last Date of physical submission of RFP** | 07/12/2020 |
| **Opening of RFP Proposal** | 09/12/2020 |
| **Presentation on Submitted RFP Proposal** | 15/12/2020 Onward |
| **Validity of RFP proposal** | 120 days from the date of Opening of RFP Proposal |
| | sd/-<br>    Registrar |

For Bid and Clarification purposes only, the Purchaser's address is RSGC, BHU **Barkachha, Mirzapur, 231001.**

| | | |
|---|---|---|
| Attention | : | **Prof. Ramadevi Nimmanapalli** |
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| Floor/ Room number | : | Admin Building |
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| ZIP Code | : | **231001** |
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# Request for Proposal (RFP) for Campus Wide Network Setup along with dedicated redundant ISP Lease lines (Synchronous 1:1) and its operation and maintenance at RGSC Campus

## Section 1: Invitation for RFP

### 1.1 Background

BHU has established the Rajiv Gandhi South Campus at Barkachha about 75 Kms southwest of Varanasi on 2760 acres of land situated about 8 km South West of Mirzapur, U.P. on Robertsganj high way. The first academic session commenced from 2006-07 with six programs which has increased to more than 25 in the present session. This campus is emerging as a potential hub to impart education, training and entrepreneurship development skills, to the youth, women and marginalized sections of society in the backward region of Mirzapur and adjoining districts of Uttar Pradesh, Western Bihar and Northern Madhya Pradesh. The Campus is heading well as per vision for education to generate new breed of human resource who would be job creators and not job seekers.

There are 09 hostels (the number of hostels may be increased in future) with an accommodation capacity of 4000 students in the campus. The University provides accommodation to its faculty as well as staff. The numbers of residential quarters are 05 for teaching and non-teaching staff and may be increased in future. The total number of existing students, faculty and staff is approximately 6000 in campus that may be increased to 8000 to 10000 in future. In addition, the RGSC has one guest houses provide accommodation to the guests. The Various multi-storied buildings of departments, administrative buildings, Central Library, residential Quarters, Guest House are situated in entire campus of RGSC at different locations.

BHU wish to hire the services of an eligible, reputed and qualified OEM/Systems Integrators (SI/ Bidders) (Please also see**Section2:Pre-Qualification Criteria**) for the Design, supply, installation, configuration, commissioning of Campus Wide Network Setup along with Dedicated redundant ISP Lease lines (Synchronous 1:1) and its operation and maintenance at RGSC Campus as described in **Section 3: Scope of Work** of this RFP Document.

### 1.2 Invitation

a) This invitation for RFP is open to all OEM/SI/Bidders (from India only) meeting the eligibility criteria as mentioned in Section2:**Pre-Qualification Criteria** of this document.
b) Through this RFP, RGSC Barkachha, Mirzapur, invites turnkey solution based proposals from eligible, reputed and qualified Systems Integrators (SI/ Bidders) for the Design, supply, installation, configuration, commissioning of Campus Wide Network Setup along with

Dedicated redundant ISP Lease lines (Synchronous 1:1) and its operation and maintenance at RGSC Campus as described in **Section 3: Scope of Work** of this RFP Document.

**c) An Open Tender/Bid (Technical and Financial bids) will be invited later from the eligible/qualifying firms based on the RFP submitted and presentation thereof. Physical presence of the firm's representative shall be mandatory at the time of presentation of solution in response of RFP submitted before the committee. No RFP shall be considered in the absence of detailed technical presentation and complete solution in front of the committee on the dates decided by RGSC.**

d) The Evaluation Committee shall evaluate the submitted RFP based on the eligibility criteria, the presentation made by the bidder and strict compliance to the **Section 4: Scope of Work and other terms & conditioned mentioned in this RFP**. If Evaluation Committee decides those Venders who fulfil the eligibility criteria and have submitted all required documents in their Technical Proposal may be invited to make presentations on their Technical Proposal at a date/time to be specified and conveyed by RGSC. The presentation would be made by team members identified to work with RGSC.

**e) Only shortlisted vendors who have participated in the RFP will be allowed to finally participate and submit their quotation (technical and financial) in Open Tender/Bid. Those who have not been participated in RFP will not be allowed to submit their quotation and the quotation received from any such vendor will be rejected. Hence all the prospective bidders are requested to participate in RFP.**

**f)EMD will be required when the Open Tender/Bid (Technical and Financial bids) will be invited later from the eligible/qualifying firms based on the RFP submitted and presentation thereof.**

**g)** the vendor must have a well-defined methodology to deploy the turnkey solution based proposals for the design, supply, installation, configuration, commissioning of Campus Wide Network Setup along with Dedicated redundant ISP Lease lines and its operation and maintenance, etc. to provide the indicative deliverables mentioned in the Scope of Work. The bidder will attach the Project plan to fulfil the Defined deliverables and other additional proposed functionalities in terms of scalabilities of functionalities with timelines.

h) OEM or its authorized dealers/ distributors or Service integrators may participate in this RFP.

i) Cover RFP is not permitted. Either the OEM or SI (including its authorized distributors/ dealers) in India can submit their RFP (both cannot submit two separate RFP).

j) The RFP must be accompanied with duly filled in Information sheets and sufficient documentary evidence. RFP with incomplete Information or insufficient documentary evidence shall not be considered for presentation thereof and shall be liable to be rejected.

k)BHU reserves the right to modify, expand, restrict, scrap, and re-float the RFP.

l)BHU reserves the right to restrict the number of short-listed firms, as deemed fit and necessary, to be called for presentation based on fulfilment of pre-qualification criteria.

m)To assist in the examination of RFP, the competent authority reserves the right to seek clarifications on the plan submitted by the bidder/OEM.

n) This RFP includes statements, which may reflect various assumptions and assessments arrived at by BHU in relation to the Project. Such assumptions, assessments and statements do not purport to contain all the information that each Bidder may require. The assumptions, assessments, statements and information contained in this RFP may not be complete, accurate, adequate or correct. Each Bidder should, therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments, statements and information contained in this RFP and obtain independent advice from appropriate sources. BHU may in its absolute

discretion, but without being under any obligation to do so, update, amend or supplement the information, assessment or assumptions contained in this Tender.

o) The bidder firm (OEM/ System Integrator) is required to do the site survey and submit the complete solution with RFP including design, drawing. The survey shall be carried out with prior permission of RGSC authorities. This includes cabling plan, network structure plan, network design and complete solution.

p)All the cost towards the submission of RFP and thereafter preparation of design, layouts and submission of hard copies to BHU shall be borne by the bidder and no claim towards this shall be entertained by BHU.

q)It will be the sole discretion of BHU to or not to incorporate any changes in the requirement based on feedback/input/suggestions received during the presentation/discussion. The decision of the BHU regarding acceptability of any suggestion shall be final in this regard.

r) Any contract that may result from this procurement competition will be issued for a term of Eight years (entire period of 5 years warranty and 3 years CAMC).

s) The Purchaser reserves the right to extend the contract for a period or periods to be mutually decided by the parties, such extension or extensions on the same terms and conditions, subject to The Purchaser obligations at law.

t) The Purchaser may, at its discretion, extend the date for submission of RFP. In such a case all rights and obligations of bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

## Section 2:Pre-Qualification Criteria

a)The OEM of proposed products must be listed in the Leaders Quadrant of latest Gartner's Magic Quadrant in the category of Wired and Wireless Networking in last 3 years or for any other Infrastructure proposed in solution (Certificate to be attached).

b)  OEM should have presence in India at least from last 10 years and making no losses in networking business in last 5 financial years.(undertaking to be submitted)

c)OEM can directly propose the solution.

d)The bidders should be OEM or its authorized agent. The bidder should be a OEM, System Integrator or IT Company for participation in this RFP.

e)The bidder (if not OEM) should also have the authorization of full support of maintenance and spares as detailed in this RFP document from OEMs. An undertaking needs to be provided by the OEM stating that in the event the bidder fails to resolve/handle any issue within stipulated time limits, OEM would take the responsibility of handling the issue directly or through its channel Partner. The OEM shall co-ordinate with bidder for support, configuration issues, hardware replacement etc.

f) Bidder should submit valid MAF from approved OEM makes of Active, Passive, UPS & RF Components. Valid MAF issued by OEM's of the Active, Passive & RF components quoted by the Bidder. The bidder should be authorized to quote for the OEM products and support.

g)Warranty of all active components to be back lined from OEM. Letter from OEM on 5 years warranty support to be attached clearly mentioning that the warranty will be directly provided by OEM.

h)The bidder must be a registered company in India, registered under the Companies Act 1956.

i) The bidder should have minimum 5 years of experience for supply, installation, integration, commissioning   and   management   of   LAN   in   Govt.   Dept./PSU/Govt. Undertaking/University/Higher Educational Institute in India (Documentary proof with

satisfactory installation & acceptance of the same should be attached with offer issued by Purchaser Department).

j)Consortiums/JV bidding is not allowed.

k)The bidder's company should have GST Registration, Income Tax Registration and PAN number.

l) The bidder shall have an average annual Turnover of Rs 10 (Ten)Cr during the last three financial years ending 31.03.2020. This turnover should be on account of Setting of Networking (LAN, Wi-Fi over LAN, RF), ICT Systems Development and Implementation (i.e. revenue should be on account of Network setup/System Integration/ Turnkey solutions or projects and their associated maintenance or implementation services, etc.) only. The turnover refers to standalone of the company and not the group turnover of its subsidiaries / sister concern etc. the bidder will submit the Certified Copy of Audited balance sheet of last three financial years and the Certificate from the Chartered Accountant / Statutory Auditor with their Registration Number & Seal for confirming Positive Net Worth.

m) The bidders company must have successfully implemented at least the following numbers of ICT engagement(s) involving setting up of Networking (Network involving at least two sites and minimum 500nodes /Access Points per assignment) in India of value specified herein in the past 3 FYs (as on 31st March, 2020) in Govt. Dept./PSU/Govt. Undertaking/University/Higher Educational Institute in India (Documentary proof with satisfactory installation & acceptance of the same should be attached with offer issued by Purchaser Department):

1) Minimum One project with total project cost exceeding Rs. (2) Two Cr, or

2) Minimum Two projects with each project cost exceeding Rs. (1) One Cr

Work Orders and Completion Certificate/Acceptance Certificate/ Payment proof/Tax Invoice copy/ Documents establishing required experience is mandatory to submit.

n) The SI shall furnish a certificate from the OEM to provide technical support for the Active and Passive elements in terms of spares, replacement and repairs/ patches/ upgrades for the entire period of warranty and CAMC clauses.

o) The Bidder must hold a valid ISO 9001:2015Certification or better Certification.Copy of valid ISO Certificates should be attached.

p) The Bidder should have its own after sales support facilities in at leastone place in India preferably Noida/Delhi/Calcutta/Lucknow region. The support facilities should be fully owned by the Bidder / OEM and managed by their permanent employees (company payroll) and not through franchisee(s).

q) The Bidder shall not be under declaration of ineligibility for corrupt or fraudulent practices. A certificate (Affidavit) to be signed by MD / CEO of the company that they haven't been debarred or blacklisted for any services, supplies or products dealing in, by any organizations or educational Institute/ University or state/ central government.

## Section3: Scope of Work

### 3.1. Objective

1)The objective is purely for the selection of Bidder/SI/IT Company/Firm to design and connect, through the proposed Campus wide Network Setup solution, all Buildings, rooms, Conference Hall, Centralized Library, Admin Building of RGSC campus in such a way that Internet services can be catered to all end users and stake holders of RGSC campus with minimum communication overheads in Network Bandwidth and throughput, low latency, full redundancy, scalable, reliable and high performance (QoS).

2)The network setup solution and supporting equipment must be scalable enough to cater bandwidth requirement (Network as well as Application) per user/per connection /per

location and must not be bottlenecked in case of increasing number of connecting devices, number of     users and concurrent users, number of concurrent connection per users, concurrent sessions and concurrent session per user.

3)Apart from some Application services running in RGSC campus, all Application services hosted and running in BHU campus network will be available and utilized in to RGSC campus network.

4)The Application Bandwidth of these hosted Application services (some of them are ERP, Online contents, Smart Classes(video  lectures, Quiz, tutorials), video conferencing, online examination, Digital Library, journal access from outside of BHU campus, High Performance Computing(Saas, Paas, Iaas), Internal Website, etc.) in BHU Campus having either interactive or non-interactive session may varies between 200kbps to 15 Mbps or more upload / download depending upon application. The network setup solution and supporting equipment must be scalable enough to cater bandwidth requirement (Network as well as Application) without any degradation of Qos with minimum communication overheads in Network Bandwidth and throughput.

5)The Application services will be extended to end to end user of BHU and RGSC campus using encryption protocols with VPN ( SSL Portal, SSL tunnelling, IPSec VPN), VPN Gateway over WiFi or any other connectivity suggested in proposed solution without any degradation of Qos, congestion, data loss, data breach, data limit, insecure access and DDos Attacks.

6)The network setup solution and supporting equipment must cope up with Firewall port opening and blocking challenges, VPN logging and VPN limitation in mass usages, Multi-Factor Authentication on VPN, slow connection, connection problem in dead spots, rate limit for higher bandwidth for prioritize users, attacks and vulnerability on Wifi, cyber attacks, session hijacking, phishing attacks, VPN version on client side, connected device type (Laptop, Mobile or any other gadgets).

7)The network setup solution may be based on hybrid technology (LAN and WiFi over LAN) or based on any other technology proposed in solution. In case of solution based on hybrid technology (WiFi over LAN based solution), both traffic( WiFi and LAN) must be passed through same Access Switches, Distribution Switches, Core Switches, Wireless Controller, Firewall/UTM, Routers / Link load balancer without any blocking and restriction from end to end user securely.

8)The Network solution must be capable of handling security issues through Authentication(must have and support LDAP, NTML, pluggable, SMB, Kerberos, NIS Authentication, AAA Authentication). The end to end encrypted secure content delivery must be ensured in deployed network infrastructures.

9)The Network Infrastructures in Network Designing must have capable of handling security issues in its core very efficiently and seriously. The Network Infrastructures used must be capable of handling about possible future cyber-attacks, vulnerabilities and threats in security of Network and services through patches and bugs removing in core and extensions and get informed in advance through issuing Security Bulletins time to time. The designed and deployed Network setup must be audited for Network Security Audit by CERT-IN (http://www.cert-in.org.in) approved agencies and it must get required certification for security audit for the same. The required changes suggested in the security audit report have to be incorporated in the Network deployed in RGSC and re-audit has to be done to see that the deployed Network is safe. Getting the Security Audit by CERT-IN empanelled agency and obtaining all necessary certificates and to ensure that Network Infrastructures comply with the standard guidelines will be the responsibility of the solution provider including the cost involved.

10)The Vendor need to verify the availability of infrastructure at RGSC to cater and fulfil the functionalities mentioned in the Scope of Work as well as to fulfil the scalability of functional requirements that are necessary or may be arise/asked in future keeping in the view of diversified users' need in RGSC campus.

### 3.2:Major Scope of Work

The Scope of Work (SOW) for this RFP includes the following major works to fulfil the purpose mentioned in the Section 3.1:Objective and other Sections of this RFP.
a) Site survey, planning & design for the proposed augmented Campus wide network setup along with Dedicated redundant ISP Lease Lines(Synchronous 1:1)at RGSC for approximately 6000 total users with 2000 concurrent users. The number of users in future may increase by another 2000/4000 users.
b) Preparation and submission of technical solution document along with detailed Bill of Material (BoM) and Bill of Quantity (BoQ) with OEM make/model/part-code/numbers (as per parameters given in Annexure) for all Active & Passive network components as well as dependencies like – Servers, OS & Applications Software, UPS, etc.
c) Preparation of an estimate of the expenditure separately for the components as detailed submitted in BOM and BoQ. BHU may ask to submit approximate cost of proposed solution.
d) Option in design using exclusive rings for each active device in fail-safe, high-availability configuration.
e). The bidder should also provide detailed note on the understanding of purpose, objective and scope of the project and outline of the proposed solution under the following topics:
i) Overview of the Proposed Solution
ii) Overall architecture
iii) Security architecture
iv) Scalability
v) Redundancy
vi) Operations & Maintenance
vii) Training
viii) Quality assurance/process
ix) Any other additional requirement that the bidder envisages is necessary forthe success of the project.

### 3.3: Brief Scope of Work

a) This section provides details on features and services to be provided by the selected Vendor for the supply, installation, testing and commissioning of equipment(Active & Passive), ISP Lease Lines and its maintenance at RGSC campus.
b)The contract will cover the system design, supply, delivery, implementation, testing &commissioning and have onsite warranty for 5-year, followed by an Comprehensive annual maintenance period (CAMC) or multi-year extended warranty period for additional 3 years if approved by BHU Administration.
c)Integration of existing network with new network, maintaining entire network during and after expiry of the warranty period of existing network and ensuring the continuity and support for all services running at present on existing network will also be responsibility of the bidder.
d)The network will be monitored and managed through NMS installed at RGSC. Operating System & Server for NMS shall also be provided by supplier.

e) Uninterrupted power supply (UPS) will be provided to all active elements to ensure interruption free operations during temporary power failures.

f) Each equipment shall have 30% extra capacity for future requirements.

g)Management of the entire network for entire period of Warranty and CAMC by providing one technical person of agreed qualifications at RGSC sites is also the responsibility of the supplier.

h)During the maintenance period the  solution provider/firm should station one engineer/IT professional in RGSC campus to resolve any day to day problems. Problems that may arise in the Network and catering end to end services needs to be resolved within 24 hours. The successful bidder shall provide one Resident Network Engineer (RNE)/ Network Administrator (RNA)who will be responsible for maintenance of Network in his area of jurisdiction for entire period of Warranty and CAMC. RNE/RNA will be deployed on full time basis. He must be well qualified &experienced network engineer with following qualifications:

B.Tech in Engineering in IT/CS/Electronics/Electronics & Communication or B.C.A/ M.C.A with OEM or CISCO Professional Certification and minimum 3 years post qualification experience of Network Management. All the documents relate to qualification & experience shall be deposited before joining with a copy to RGSC Administration.

h.1)Key responsibilities of RNE/RNA:

1) Work under the supervision of concerned Personnel and as per norms, terms & conditions and allotted time (9.00 AM to6.00 PM, 6 days a week) ensuring that the system is available 24x7x365as prescribed in this RFP.

2) Be responsible to configure Active Equipment and Services for best performance and checking of unnecessary network traffic for complete network.

3) Attending to and resolving system failures and snags

4) Support and maintain the overall infrastructure of Network setup in RGSC.

5) Configuration and backup of system data including documentation of all configurations, Network VLANS, Policies etc.

6) 24x7 monitoring of the system to spot the problems immediately.

7) Provide L1 support for existing network. L2 support shall be provided by existing systems integrator/OEM.

8) Operate the NMS.

h.2)Penalty for Default & Replacement of RNE/RNA:

1) The bidder will arrange suitable resource in case their deployed RNE/RNA is not available for more than 3 working days. If he fails to deploy the engineer within allotted time frame than he will be liable to pay the penalty @ Rs. 2000/- per day and arrange suitable resources.

2) If the service of deployed Network Engineer/Network Administrator is not as per the norms and concerned Personnel of RGSC feels that the work of deployed Network Engineer/Network Administrator is not satisfactory then the bidder will replace the Network Engineer/Network Administrator within seven days with written confirmation to the concerned personnel of RGSC.

## 3.4: Work Plan, Specifications and work involved

The work plan must cover the following major activities:

**a)Site Survey, Requirement Analysis and Design Assessment:**

i) Site survey should be conducted by supplier for each site to study the exact requirement for Network enhancement which include existing details, existing layout plan, New / Proposed Network plan, Complete Network Plan along with detailed location of each component.

ii)The bidder will visit all sites, prepare site survey reports, get the survey reports, submit 3 copies of survey report. Details of points to be adhered for survey and Network design are mentioned in various sections of this RFP.

The survey report must consist of followings:

1) Existing Network Diagram.

2) New Proposed Network Diagram.

3) Complete Network Flow Diagram with detailed action plan which consist of Backend connectivity details, open &underground cabling, Uplinks details, Stacking details etc.

4) IP scheme for complete network as an extension of existing IP scheme.

5) Details of existing components to be used.

6) Complete item wise bill of material (BoM) and bill of quantities (BoQ) for new network setup.

7) Based upon survey reports, the Selected Bidder will have an option to relocate equipment from one location to another location for better network management, single point of responsibility and single OEM for all active components. For this purpose, the selected bidder will submit a proposal/report RGSC for its approval with 15 days of completion of all site surveys.

8)After survey of various sites by the successful bidder, a proposed work plan along with proposed Network design should be submitted in this RFP and the work plan should indicate the time line for completion of work. The overall work plan shall be designed in such a manner so as to complete the entire work within the time frame as indicated in the submitted RFP. The work plan shall be finalized after its approval by RGSC. Further the RGSC reserves its rights to direct prioritization of installation work at certain locations, if need be.

9) Installation, commissioning and submission of testing report of the network components as per the approved site survey report and provide central manageability through Network Management Software (NMS) whenever contract and order will be awarded.

10) Posting of one Resident Network Engineer/Network Administrator for the entire period of warranty and CAMC from date of first inspection of operational network.

11) Network Audit by the purchaser.

12) Any other additional requirement that the bidder envisages is necessary for the success of the project.

**b) Functional Requirements:**

i) Maximum use to be made of the components in the new network.

ii) Preparation of Detailed Network Plan & its approval from RGSC.

iii) Plan extension of UPS power to all equipment in the new network.

iv)The bidder will configure all Network equipment for meeting the all functional requirements and central manageability up to port level from Computer Centre cum server room through supplied NMS with core equipment from the same OEM.

v) The bidder will provide onsite support, operation and maintenance for entire period of Warranty and Comprehensive Annual Maintenance Contract(CAMC) through his stationed Network Engineer/Network Administrator and resolve any day to day problems that may arise in the Network and catering end to end services.

vi) In RGSC, New Core equipment will be placed in the server room. Two core equipment will connect / stack on a minimum 10 Gbps uplink port. Necessary optics and patch chords /

stack cables shall be provided by the supplier. One uplink port of all other equipment will connect to uplink ports of the core equipment at 1 Gbps on OM-4 fiber.

vii) Prepare UPS Power extensions plan for all Network equipment and get the same approved from concerned personnel of RGSC.

viii) Provide redundant OM-4 Fiber backbone cable from core equipment to each edge equipment.

ix) Install and configure all Active components for best performance of Network.

x) Assign IP addresses & user-ids as desired by the RGSC. All users (nodes) shall access the network in a secured manner using assigned user-ids & passwords.

xi) Submit all equipment configurations, password & testing reports to RGSC.

xii)All servers, physical appliances, software and licenses required should be clearly mentioned in the solution document and included in the BoQ.


**c)User's Authentication and Network Access Control:**

User's Authentication and Network Access Control must be included in solution.

i. The proposed solution shall provision 802.1x based RADIUS/AAA authentication for all users along with BYOD & network access/admission/Access control for wired as well as wireless users.

ii. The proposed solution shall provision credential-based authentication or certificate-based authentication. Preference will be given to certificate-based authentication.

iii. All the software and firmware in proposed solution must have Perpetual Licences or subscription licensing for 5 years. In case of subscription based licensing, beyond of 5 years licence, additional 3 years licence will be included for CAMC. A certification from OEM in this regard must be provided in solution. Preference will be given to solution having Perpetual Licences.

iv. All new/guest users will be able to connect to Guest VLAN only, which gives portal asking for Registration and provides limited Internet use (no social networking sites; and as decided by RGSC). Registration request will be validated by the Network Administrator and legitimate users will get the login credentials through SMS/email.

v. Users should not be able to add switches/APs to the access port at their own i.e. the device must be validated by the Network Administrator before its connection to the network.

vi. Users should not be able to create hotspots on their devices.

**d)Network Management system (NMS)**

i.Web based user interface (secured).

ii. Should support full configuration, fault and performance management.

iii. Ability to present graphical view of the network.

iv. Should support various privilege levels.

v. Capability to view the network topology.

vi. The NMS should be able to manage all the active components, Wired and Wireless elements, of the network.

vii. The NMS should have the capabilities to support all the manageable elements in the existing Network irrespective of OEM.

**e) Migration activities for change of location:**
In case RGSC wishes to shift the devices from one place to another anywhere in the campus, adequate support will be made available by the bidder by arranging field engineer for the purpose of dismantling of devices supplied by Service provider & hand-over to the concerned Officials, pre-shifting inspection, post-shifting inspection, re-installation etc. of all devices supplied by Service provider. All migration related activities to be done after Working / session hours /according to RFSC convenience & the engineer have to be deployed as per the requirements. The bidder will bear all expenses for packing, shifting, insurance and other incidentals at actual. RGSC will not be responsible or liable for any losses, damages to the items of equipment's, tools and machinery while such dismantling, pre-shifting inspection, post-shifting inspection, and re-installation etc. is being carried out. Bidder shall make available adequate alternative arrangement to ensure that the system functioning is neither affected nor dislocated during the shifting process. It is the responsibility of field engineer to integrate devices delivered at required location and coordinate with RGSC NOC to extend the reachability.

**f) Alternate Networking Solution**

a) The required networking solution given in this RFP is indicative. The bidders may propose an alternate solution with recommendations for improving the effectiveness and efficiency of the networking solution along with details of implementing similar solutions in other organizations if any. The bidder shall explain all special features incorporated in the suggested solution clearly indicating the advantages of these features.
b) Bidder is also required to send a detailed Action Plan for supply of equipment, installation and commissioning of the system along with a network diagram of the proposed Alternate Networking Solution. This is required for technical evaluation of the bidders. RGSC may ask the bidders to make a presentation of their suggested solution to Technical Evaluation Team.
c) The bidder should also provide detailed note on the understanding of purpose, objective and scope of the suggested project and outline of the proposed Alternate Networking Solution covering the various points mentioned in entire section of the RFP.

**g) General Requirements**

**1)Eligible equipment and Services**
a) All the equipment to be installed must bear reputed brands. All Network equipment should be of the same make / same OEM including NMS. All passive components should be from the same OEM except UPS System, Rack & Conduit. All items to be used for the Network should be compatible with each other including existing components, Necessary Drivers and Software required to run the equipment should be supplied by the supplier during installation without an additional cost.
b) If the Bidder does not manufacture the equipment, proof of authorization from manufacturers must be submitted by him as part of their technical bid.
c) All accessories bundled by the manufacturer with the equipment and its test reports shall accompany the equipment.
d) OEM should have been supporting the products under its own name and brand since last 5 years (as on 31st March, 2020).
e) Latest version/ model of equipment are to be selected in design of proposed solution. Used/ re-manufactured equipment will not be accepted.

f) The model of the Items already earmarked by OEM for withdrawal from the market / reaching their end of life and end of support in next five years and the models which are still under quality testing should not be offered.

g) The indicative bill of materials (BOM) and bill of quantities (BOQ) will be given by Bidder. The vendor may include any other item felt necessary for providing the solution. These may be clearly mentioned by the bidder under the heading "other items".

h)Make and Model of the equipment offered shall be mentioned in the solution along with its parameters.

i)The operating conditions for the equipment are; Power: 230□10%, Frequency:50 Hz □3%, Operating Temperature: 0-45oC & Operating RH: 20-90%

j) The Models of the Items offered should strictly conform to the specifications given in the product literature and these models should be supported for the entire period of the contract.

k) When the configuration/ feature required is not available in a particular Item model, the next available higher configuration model or equitant shall be offered. The same should be evidenced with OEM certification.

l) The quoted products should be latest version and should not be end of life and end of support for next 5 years. Level -1 support at site is to be provided by the bidder. Level -2support should be provided by the OEM directly at site. Certificate of OEM for the same should be submitted along with technical bid**.** Details of OEM support pack should be provided for this purpose. OEM support pack should be tune with the SLA for entire period of warranty and CAMC.

**2)Perpetual Licenses:** The offered software and Firmware license(s) will not have a termination date. All software and Firmware licenses will be perpetual, surviving bankruptcy, sale, merger, or dissolution of any of the entities providing software and Firmware to the RGSC. No additional license fee will be payable by RGSC for meeting performance requirement / Minor modification / addition during warranty period for 5 years &3 years CAMC.

**3) Insurance**

i) The equipment supplied under the contract shall be fully insured by the vendor against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery.

ii) The insurance shall be obtained by the vendor for an amount equal to the exact value of goods up to the delivery at site on all risks basis, including war risks and strike clauses etc.

**h) Inspections and Tests**

a) The Supplier will test any / all equipment after completion of the installation condition to conform to the specifications, functionality of device. If any inspected or tested items fail to conform to the specifications, the Purchaser may reject them and the Supplier shall either replace the rejected items or make all alterations necessary to meet specification requirements free of cost to the Purchaser.

b) The Purchaser will test the whole network hardware after completion of the installation and commissioning at the site of the installation. For site preparation, the Supplier should furnish all details to the Purchaser sufficiently in advance so as to get the works completed before receipt of the equipment. Complete hardware and software as specified should be supplied, installed and commissioned properly by the Supplier prior to commencement of performance tests.

c)The acceptance will involve trouble free operations for a month. There shall not be any additional charges for carrying out acceptance test. The Supplier shall maintain necessary log

in respect of the results of tests to establish to the entire satisfaction of the Purchaser, the successful completion of the test specified. An average uptime efficiency of 98% for the duration of test period shall be considered as satisfactory.

d) In the event of the equipment and/or software failing to pass the acceptance test, a period not exceeding two weeks will be given to rectify the defects and clear the acceptance test, failing which the Purchaser reserves the rights to get the equipment replaced by the Supplier at no extra cost to the Purchaser.

### i) Warranty and Comprehensive AMC (CAMC)

a) All the equipment shall carry Five (5) years onsite warranty, except mentioned otherwise, against defective workmanship and materials, faulty designs or inferior quality of materials. It shall be repaired and/or replaced at site free of charges. All OEM warranties shall be extended to the Department. All batteries shall carry three years onsite warranty. The warranty period will commence from the date of go live at Network Setup commissioned.

b) The bidders shall provide Comprehensive Annual Maintenance Contract (CAMC)of all newly installed components of Network for their 6th, 7th and 8th year after expiry of 5 years OEM warranty for each site subject to final decision to be taken by the RGSC in this regard.

c) After completion of warranty and CAMC period the supplier shall hand over complete network in all working conditions along with all configuration details, IP addresses, passwords and documentation to RGSC.

### j) Operations and Maintenance (O&M)

a) The successful vendor shall be liable to provide L1 support for all existing /installed usable components at site at no additional cost and shall work in consonance with the respective vendors/OEMs of said existing usable components for repair/replacement issues as well as L2 support. The Resident Network Engineer/Network Administrator to be provided by the successful vendor at site shall also look after the existing usable components.

b)Onsite comprehensive (including all hardware, software, network cabling for all types of defects and problems) maintenance services shall be provided by the supplier / OEM during the period of warranty and Comprehensive Annual Maintenance Contract(CAMC). In case the supplier fails to rectify the problem within 1 working day (i.e. 8hours) then OEM shall be required to provide second level L2 support, service to rectify the problem or replace the faulty system or part thereof.

c) On completion of the warranty period, the supplier will enter into Comprehensive Annual Maintenance Contract of the items. The supplier shall make available to the Purchaser all necessary spares(same or equivalent) without upsetting the compatibility/performance of any part of system, for a period of at least 3 years after the expiry of the warranty period. This shall be binding on the vendor under the Terms and Conditions of the Purchase Order to be placed on finalization of the evaluation process.

d) In case one or more items are not usable beyond the stipulated maximum downtime of 6 hours, the supplier will be required to arrange for an immediate replacement of the same till it is repaired. Failure to arrange for the immediate repair/replacement will be liable for penalty of Rs. 2000/- or 1% of the cost of items whichever is more per day. The amount of penalty will be recovered from Bank Guarantee and due payment during warranty and entire period of CAMC as the case may be.

e) The Supplier will accomplish preventive and breakdown maintenance activities to ensure that all hardware execute without defect or interruption for at least 98% uptime for 24x7 operations of the network worked on a quarterly basis. Failure to arrange for the immediate

repair/replacement will be liable for penalty of min Rs.2000/- per day. The amount of penalty will be recovered from Bank Guarantee and due payment during warranty and entire period of CAMC as the case may be.

f) If any critical component of the entire configuration is out of service for more than6 hours, the Supplier shall either immediately repair the defective unit or replace it with a new or equivalent stand by unit at its own cost. All items affected by critical item under down time will also be considered under down time.

g) The supplier is required to post one Resident Network Engineer/Network Administrator with minimum 3 years hands-on experience in configuration and troubleshooting of offered items with desired qualification & OEM Certification at RGSC premises for entire period of Warranty plus CAMC from the date of first inspection to ensure trouble free operations, equipment configuration, cable maintenance. Network Engineer/Network Administrator will act as a single point contact for all maintenance related to network equipment. He will report to RGSC and submit report on a regular basis in the format finalized / decided by RGSC with following options: Daily Report, Weekly Report, Monthly Report etc. He will also be responsible to integrate campus Network with various Wide Area Connectivity solutions as may be opted by the RGSC in future. Network Engineer/Network Administrator shall report to local nodal officer from the RGSC and will get his attendance verified from the nodal officer every month.

h) Failure to arrange for immediate repair/replacement or to accomplish preventive and breakdown activities shall render the vendor liable for a flat penalty of Rs. 2000/- per day which can also be recovered from the Bank Guarantee of the vendor. The penalty shall be calculated from the time when the vendor or his representative or the Network Engineer/Network Administrator has been informed about the fault by any official/staff of the RGSC by any means.

i) After completion of warranty / CAMC period the supplier shall handover complete network in all working conditions along with all configuration details, IP addresses, passwords and documentation to concerned personnel of RGSC.

## Annexure

**Proposed Bill of Material (BoM)/ Bill of Quantity (BoQ) for the suggested Solution:**

| S. No | Item | Description | Specifications | Configuration suggested in Proposed Solution | Qty. | Unit | Make | Model | Other Terms |
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