

Request for Proposal (RFP)

for

**Appointment of an IT Agency for
Facility Management Services, Technical Support
Services & AMC of Call Centre Software and
provision of hardware & software for operation of
DC Dehradun, DRC Haldwani & field offices of UPCL
for a period of 01 year.**



**Uttarakhand Power Corporation Limited,
V.C.V Gabar Singh Urja Bhawan,
Kanwali Road, Dehradun, Uttarakhand**



Disclaimer

This Request for Proposal (RFP) is for engaging an IT agency for **Appointment of an IT Agency for Facility Management Services, Technical Support Services & AMC of Call Centre Software and provision of hardware & software for operation of DC, Dehradun, DRC, Haldwani & field offices of UPCL for a period of 01 year** i.e. **FMS & AMS vendor** for managing Hardware and Software installed at Data Centre, Customer Care Centre in Dehradun, Disaster Recovery Centre in Haldwani and at various office locations of UPCL under RAPDRP/Non-RAPDRP and IPDS in UPCL.

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UPCL shall be the sole and final authority with respect to qualifying a bidder through this RFP. The decision of UPCL in selecting the FMS & AMS vendor who qualifies through this RFP shall be final and UPCL reserves the right to reject any or all the bids without assigning any reason thereof. UPCL may terminate the RFP process at any time without assigning any reason and upon such termination, UPCL shall not be responsible for any direct or indirect loss or damage arising out of such a termination.



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A. Acronyms and Abbreviations

Acronym	Description
AMC	Annual Maintenance Cost
API	Application Program Interface
CCN	Change Control Notice
DC	Data Center
DR	Disaster Recovery
EMD	Earnest Money Deposit
ESI	Employee State Insurance
FAQ	Frequently Asked Questions
FE	Financial Evaluation
FY	Financial Year
GIS	Geographic Information System
Gol	Government of India
GoU	Government of Uttarakhand
INR	Indian National Rupees
IPR	Intellectual Property Rights
ISO	International Organization for Standardization
ISP	Internet Service Provider
ITCC	Income Tax Clearance Certificate
LAN	Local Area Network
LD	Liquidated Damages
LOI	Letter of Intent
MDAS	Meter Data Acquisition System
MDM	Meter Data Management
MICR	Magnetic Ink Character Recognition
MIS	Management Information System
MPLS	Multiprotocol Label Switching
NOC	No Objection Certificate
MoP	Ministry of Power
OEM	Original Equipment Manufacturer
PAN	Permanent Account Number
PBG	Performance Bank Guarantee
PFC	Power Finance Corporation
PO	Purchase Order
RFP	Request for Proposal
UAT	User Acceptance Test
UPCL	UttarakhandPower Corporation Limited
VAT	Value Added Tax
VSAT	Very Small Aperture Terminal
WAN	Wide Area Network
FMS	Facility Management Service
MBC	Metering , Billing & Collection
AMS	Annual Maintenance Service
IPDS	Integrated Power Development Scheme
RAPDRP	Restructured Accelerated Power Development & Reforms Program



A. About Request for Proposal (RFP)

This document constitutes the Request for Proposal (RFP) for engaging an agency to be called as "Agency for Appointment of an IT Agency for Facility Management Services, Technical Support Services & AMC of Call Centre Software and provision of hardware & software for operation of DC, Dehradun, DRC, Haldwani & field offices of UPCL for a period of 01 year" in Uttarakhand Power Corporation Ltd. (referred in the document as UPCL) for managing IT Hardware & Software installed at Data Centre & Customer Care Center at Dehradun, Disaster Recovery Centre at Haldwani and at various field office locations of UPCL across the state of Uttarakhand under flagship program of MoP, Goli.eR-APDRP and IPDS in UPCL.

This RFP has been prepared to invite prospective bidders to submit their proposals for Facility Management Service, Technical Support Services for the IT system developed under RAPDRP Part-A and IPDS IT phase II scheme of MoP, GoI in UPCL and AMC/AMS of Callcenter Software, Upgradation / enhancement of mobile applications on new technology for a period of 1 year. Information used for the preparation of this RFP is based on relevant and published sources of UPCL. Nonetheless, bidders are required to make informed evaluation and decision based on their judgment.

This RFP document contains the entire information that constitutes the requirement as proposed by UPCL in order for qualified bidders to submit their proposals. Any queries or clarifications must be submitted in the prescribed format Form-15.

This RFP comprises the following sections/chapters:

Chapter No.	Name of Chapter
Chapter 1	Instruction to Bidders
Chapter 2	Schedule of RFP Bidding Process
Chapter 3	Evaluation Criteria
Chapter 4	About the IT System of UPCL
Chapter 5	Scope of Work
Chapter 6	Resource Deployment Requirement
Chapter 7	FMS Duration /Service Level/Criticality
Chapter 8	Timelines, Delivery Schedule & Deliverables
Chapter 9	Appointment of FMS & AMS Vendor
Chapter 10	Performance Bank Guarantee
Chapter 11	Signing of Contract
Chapter 12	Failure to agree with Terms and Conditions of RFP
Chapter 13	General Conditions of Contract
Chapter 14	Schedules
Chapter 15	Forms
Chapter 16	Annexures



1. Instructions to Bidders

1.1 General

1. While every effort has been made to provide comprehensive and accurate background information, requirements, and specifications, bidders must form their own conclusions about the solution needed to meet the requirements.
2. All information supplied by bidders in the submitted bid document may be treated as contractually binding on the bidders on successful award of the work by UPCL as per the terms and conditions of this RFP.
3. No commitment of any kind, contractual or otherwise shall exist unless and until a formal written contract has been executed by UPCL. Any notification of preferred bidder status by UPCL shall not give rise to any enforceable rights by the bidder. UPCL may cancel this public procurement at any time prior to a formal written communication being executed by UPCL.
4. This RFP supersedes and replaces any previous public documentation & communications and bidders should place no reliance on such communications.

1.2 Compliant Proposals / Completeness of Response

1. Bidders are advised to study all instructions, forms, terms, requirements and other information in the RFP document carefully. Submission of the bid shall be done after careful study and examination of the RFP document with full understanding of its implications.
2. Failure to comply with the requirements of this paragraph may render the proposal non-compliant and the proposal may be rejected. Bidders must:
 - a) Include all documentation specified in this RFP
 - b) Follow the format of this RFP and respond to each element in the order as set out in this RFP
 - c) Comply with all requirements as set out within this RFP

1.3 Key Requirements of the Bid

1.3.1 Right to Terminate the RFP Process

1. UPCL may terminate the RFP process at any time and without assigning any reason. UPCL makes no commitments, express or implied, that this process will result in a business transaction with anyone.
2. This RFP does not constitute an offer by UPCL. The bidder's participation in this process may result UPCL selecting the bidder to engage towards execution of the contract.



1.3.2 RFP Document Fees

1. The bidders may download the RFP document from the tender portal <https://uktenders.gov.in>. The bidders shall submit, along with their bids, RFP document fees of **INR 25,000** along with GST @18% making it a total amount of **INR 29,500 (INR TWENTY-NINE THOUSAND FIVE HUNDRED ONLY)** in the form of a demand draft in favour of “**Executive Engineer (RAPDRP-PART A), UPCL, Dehradun**”, payable at Dehradun. The demand draft of RFP document fees should be submitted along with Proposal. Proposals received without or with inadequate RFP document fees shall be rejected.

1.3.3 Earnest Money Deposit (EMD)

Bidders shall submit EMD of **INR 37 LAKH (INR THIRTY SEVEN LAKH ONLY)** along with their bids in the form of a bank guarantee (in the format specified in **Annexure - 3**) /Demand Draft/ FDR issued by any nationalised/scheduled bank in favour of “**Executive Engineer (RAPDRP-PART A), UPCL, Dehradun**” and should be valid for **a minimum period of six (6) months** from the date of the submission of the bids by bidders.

1. EMD of all unsuccessful bidders will be returned by UPCL within 45 days after award of contract to successful bidder. The EMD for the amount mentioned above, of successful bidder would be returned upon submission of performance bank guarantee as per the format provided in **Annexure 4**.
2. The EMD amount is interest free and will be refundable to the unsuccessful bidders without any accrued interest on it.
3. The bid / proposal submitted without EMD, mentioned above, will be summarily rejected.
4. The EMD may be forfeited:
 - d) If a bidder withdraws its bid during the period of bid validity.
 - e) In case of a successful bidder, if the bidder fails to sign the contract in accordance with this RFP.

1.3.4 Submission of Proposal

1. Only online submission of bid is permitted, hence the bids shall have to be submitted online on <https://uktenders.gov.in>
2. Digital signature certificate is mandatory to participate in the e-tendering. Bidders already possessing the digital signature issued from authorized certifying agency can use the same in this bid.
3. The technical qualification part of the bids will be opened online at the date and time given in the “Chapter 2-Schedule of RFP Bidding Process” and in the presence of authorized representative(s) of the bidders who choose to remain present, in the office of **Superintending Engineer (R-APDRP Part A), V.C.V Gabar Singh Urja Bhawan, Kanwali Road, Dehradun-248001**. If the office happens to be closed on the date of opening of the bids as specified, the bids will be opened on the next working day at the same time and venue.



4. After opening of the bid (Part-1), evaluation shall be done and the bidder shall be evaluated for qualification. The list of the technically qualified bidders shall be displayed on the portal <https://uktenders.gov.in>
5. Financial bid (Part-II) of technically qualified bidders shall be opened(**through online mode only**) subsequently for which date & time for opening shall be intimated separately and the details shall also be available on <https://uktenders.gov.in>
6. The bidders are required to submit following original documents in the office of Superintending Engineer (R-APDRP Part A), V.C.V Gabar Singh Urja Bhawan, Kanwali Road, Dehradun-248001 on or before the last date and time of submission of bids
 - a) Demand draft of any nationalized/scheduled bank towards the cost of bid document as specified above in **Section 1.3.2**
 - b) Earnest Money Deposit as specified above in **Section 1.3.3**
 - c) Agreement of validity on non-judicial stamp paper of Rs.100/- plus revenue stamp of Rs.1/- as per **Form - 12**
 - d) An affidavit on a non-judicial Stamp paper of Rs 10/- only, by the bidder regarding correctness of information/documents furnished with bid document as per **Form - 13**
 - e) Power of Attorney in the name of authorized signatory on Rs. 100/- Stamp paper as per **Annexure - 1**
7. Hard copy(**one copy**) of the complete bid document is required to be submitted. In case of variations found between hard copy and documents downloaded from the portal, the latter shall prevail.
8. Above-mentioned original documents are required to be submitted on or before the last date and time of submission of bids. In case these documents are received after the due date and the specified time (including the extended period if any) for any reason whatsoever, bid shall not be entertained and will be rejected.

1.3.5 Authentication of Bids

1. The proposal should be accompanied by a power-of-attorney in the name of the signatory of the proposal as per **Annexure - 1**.

1.4 Preparation & Submission of Proposal

1.4.1 Proposal Preparation Costs

1. The bidder shall be responsible for all costs incurred in connection with participation in the RFP process, including, but not limited to, costs incurred in conduct of informative and other diligence activities, participation in meetings/discussions/presentations, preparation of proposal, in providing any additional information required by UPCL to facilitate the evaluation process, and in negotiating a definitive contract or all such activities related to the bid process.



2. UPCL in no case will be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

1.4.2 Language

1. The proposal should be filled by the bidder in English language only. If any supporting documents submitted are in any language other than English, translation of the same in English language is to be duly attested by the bidders. For purposes of interpretation of the proposal, the English translation shall govern.

1.5 Evaluation Process

1. UPCL shall evaluate the responses to the RFP and all supporting documents / documentary evidence. Inability to submit requisite supporting documents / documentary evidence, may lead to rejection.
2. The decision of UPCL in the evaluation of responses to the RFP shall be final. No correspondence will be entertained outside the process of negotiation/ discussion with UPCL.
3. UPCL may ask for meetings with the bidders to seek clarifications on their proposals.
4. UPCL reserves the right to reject any or all proposals based on any deviations.
5. Each of the responses shall be evaluated as per the criteria and requirements specified in this RFP.

1.5.1 Bid Opening

As per NIT and respective corrigenda, in the presence of those bidders or their representatives who may be present at the time of opening of bids.

1.5.2 Bid Validity

Bids submitted by the Bidders shall remain valid for acceptance till One Hundred and Eighty (180) days from the date of opening of technical bid (Part-1) submitted by the bidders. **(Form-12)**

1.5.3 Bid Evaluation

1. Initial bid scrutiny will be held and incomplete details as given below will be treated as non-responsive, if proposals:
 - a) Are not submitted as specified in the RFP document
 - b) Original documents as specified in Point no. 6 of Section 1.3.4 are not submitted in the office of Superintending Engineer (R-APDRP Part A), V.C.V Gabar Singh Urja Bhawan, Kanwali Road, Dehradun-248001 on due date
 - c) Are found with suppression of details
 - d) With incomplete information, subjective, conditional offers and partial offers submitted
 - e) Submitted without the documents requested in the checklist
 - f) With lesser validity period.



2. Schedule of RFP Bidding Process

S. No	Information	Details
1.	Tender Identification No.	02/(RAPDRP-A)/2024-25
2.	Bid validity period	Minimum 180 days from the date of opening of technical bid (Part-1) submitted by bidders
3.	Last date for submission of clarification/query	As per NIT
4.	Date of Pre-Bid Meeting at O/o Superintending Engineer, RAPDRP Part-A, V.C.V Gabar Singh Urja Bhawan, Kanwali Road, Dehradun-248001	
5.	Last Date & Time of submission of Bid (Online & Offline mode)	
6.	Due date of opening of Technical Bid	
7.	Due date of opening of Financial Bid	
8.	Contact Officer address for sending & addressing queries	Superintending Engineer (RAPDRP-A), V.C.V Gabar Singh Urja Bhawan, Kanwali Road, Dehradun-248001 Email: rapdrpparta@upcl.org Website: www.upcl.org

Please note that any change in the above schedule shall be notified through <https://uktenders.gov.in> and www.upcl.org.



3. Evaluation Criteria

1. The overall objective of this evaluation process is to select the capable and qualified FMS & TSS vendor firm having credentials in the business domain of development, customization and maintenance of IT system (Software and Hardware along with necessary Support Services) in any Power Distribution Company in India covering the Software and Hardware developed under RAPDRP Part- A project by Gol.
2. First, the submitted bids will be evaluated based on pre-qualification criteria including technical proposal and only those bidders who qualify the requirements will be eligible for next step of evaluation of financial proposal. Financial proposal of bidders who do not meet the pre-qualification criteria will not be evaluated further.

3.1 Pre-Qualification Criteria

- a. The prospective Bidder (referred as FMS and TSS vendor) shall have to enclose all documentary evidences in support of pre-qualification criteria
- b. The pre-qualification criteria of Bidders are as follows:

PQ No.	Specific Criteria	Supporting Documents Required
General Criteria		
1.	The Bidder should be a company registered under the provisions of the Indian Companies Act, 1956 / 2013 or a partnership firm registered under the Indian Partnership Act, 1936 or the Limited Liability Partnerships Act, 2008. Societies registered under Societies registration Act or Rules / Not for profit organizations setup by State Government / Ministry of Electronics and Information Technology / Government of India, for furtherance of e-Governance / undertake R&D in development of Information and Communication Technology.	<ul style="list-style-type: none"> • Certificate of incorporation / Partnership deed. • GST Registration. • Certificate of commencement of business (if applicable).
2.	The bidder should have valid Provident Fund Code, Income Tax PAN, EPF, ESI & GST Registration Certificate and must be operating in India since last five years	All the supporting documentary evidences/ Certificates issued by the competent authorities for the mentioned criteria, must be provided
3.	The Bidder should not be blacklisted or debarred by any govt. organization or public sector organisation as on the date of submission of bid.	The bidder shall submit self-declaration on Non-Judicial stamp paper of Rs. 100/-
Financial Criteria		
1	The bidder should have minimum average annual turnover of INR 28.00 Crores (Rupees Twenty- Eight Crore) during the last three financial years.	Audited Balance Sheet of last 3 financial years needs to enclosed (financial year 2021-22, 2022-23 and 2023-24). In case audited Balance Sheet of year 2023-24 is not finalized, CA certified provisional Balance Sheet needs to be attached.
2	Net Worth for the each of the last three Financial Years should be positive. 'Net-worth' will consist of 'paid up equity capital, free reserves, balance in share premium account and capital reserves representing surplus arising out of sale proceeds of assets but not reserves created by revaluation of assets' adjusted for 'accumulated loss balance, book value of intangible assets and Deferred Revenue Expenditure, if any'.	Copy of Annual Audited Financial Statements certified by Chartered Accountant for the preceding three years



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3	Bidder should have valid Certification for ISO/IEC-9001:2015 ISO 20000-1: 2018 ISO/IEC-27001:2013 on bidding date.	as	Copy of certification from authorized certification body valid as on date
4	The Bidder should have at least CMM/CMMI level 3 or above certification.		Copy of certification from authorized certification body valid as on date
Technical Criteria			
5	The bidder must have a minimum of 500 IT resource on its roll.		Copy of Self-declaration certificate
6	The Bidder should have experience of successfully executing IT support services for at least 100 remote locations in any power Discom/ PSU/ Govt. Organization in India .		All the supporting documents, purchase order and satisfactory completion certificate / ongoing certification needs to be submitted.
7	The bidder must have successfully implemented / provided Facility Management Services for On-Premise Data Centre in power Discom/ PSU/ Govt. Organization in India.		All the supporting documents, purchase order and satisfactory completion certificate / ongoing certification needs to be submitted.
8	The Bidder should have successfully provided/providing Facility Management Services for at least one power Discom in India with minimum 25 Lakh consumer base with at least 05 mandatory modules from the following: 1. Metering. 2. Billing. 3. Collection. 4. New Connection 5. Disconnection. 6. GIS and GIS based Network Analysis (Integrated with Commercial Application). 7. Customer Service. 8. Energy Audit. 9 Integration with IDAM. 10 MDAS & MDM OR Should have experience of migration of 25 Lakh consumers from one platform / technology / hardware to another in a single project for any power Discom/ PSU/ Govt. Organization in India for billing application.		All the supporting documents, purchase order and satisfactory completion certificate / ongoing certification needs to be submitted. Purchase order shall not be beyond 05 years from the date of publication of the tender. OR All the supporting documents, purchase order and satisfactory completion certificate certification needs to be submitted. Purchase order shall not be beyond 05 years from the date of publication of the tender.
9	The bidder should: - a) not be insolvent, in receivership, bankrupt or being wound up, not have its affairs administered by a court or a judicial officer, not have its business activities suspended and must not be the subject of legal proceedings for any of the foregoing reasons; b) not have, and their directors and officers not have, been convicted of any criminal offence related to their professional conduct or the making of false statements or misrepresentations as to their qualifications to enter into a procurement contract within a period of three years preceding the commencement of the procurement process, or not have been otherwise disqualified pursuant to debarment proceedings; c) not have a conflict of interest in the procurement in question as specified in the bidding document. d) comply with the code of integrity as specified in the bidding document.		Self- Certified Letter



10	The bidder shall provide OEM authorization certificate for proposed servers in capex mode	<ul style="list-style-type: none">• Tender specific authorization certificate from OEMs of servers needs to be submitted.• Technical compliance of the server needs to be submitted from the OEMs of server respectively.
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- c. The bidder has to provide the details of PQR (Pre-Qualification Requirements) supporting documents in the format as per FORM-14

3.2 Bid Evaluation Methodology

3.2.1 PQR Evaluation

First, the pre-qualification proposal will be evaluated and only those bidders who qualify the requirements will be eligible for next step of evaluation of financial proposal. Financial proposal of bidders who do not meet the pre-qualification criteria will not be evaluated further.

3.2.2 Financial Bid Evaluation

- a) The financial bids of pre-qualified bidders will be opened on the prescribed date.
- b) Successful bidder will be decided based upon lowest quote (L1 basis) for the entire scope of work.

The prices quoted by the bidder should be firm for all the deliverables and services specified in this bid document.

Any conditional bid would be rejected. The price quoted by bidders shall be in INR. Bidders shall quote base price and GST separately as per BoQ. If the bidders have quoted the GST price against any item as per BoQ, which is not correct and not matching the actual GST price, their offer shall be loaded by the actual rate as per applicable GST norms to tendered item/items and the same will be used to calculate L1 cost.



4. About the IT System of UPCL

UPCL intends to select an agency, which can empower the organization to meet the present and future challenges and handle the operations of IT system of UPCL covering all the installed Hardware, Software and necessary support of resources at site to run the modules developed under RAPDRP Part-A, IPDS IT phase II project and mobile applications developed for commercial modules. The scope also covers the necessary change requirements/customization in commercial applications due to change in electricity tariffs, supply code, regulations and as per the change requirements envisaged by the UPCL management, Uttarakhand Electricity Regulatory Commission, any other statutory body or Govt. of Uttarakhand/India from time to time.

4.1 UPCL at a glance

UPCL was incorporated under the Companies Act, 1956 on 12-02-2001. UPCL was initially entrusted with the work of transmission and distribution of electricity in the State of Uttarakhand. As per the mandate of Electricity Act, 2003, the transmission business was transferred to a newly formed State owned company named as "Power Transmission Corporation of Uttarakhand Limited" from 01-06-2004. Since then UPCL is a sole distribution licensee for distribution of electricity in the state.

4.2 Brief About RAPDRP and IPDS Project

The Government of India in 10th Plan started Accelerated Power development and reforms program for reforms in distribution with following objective: -

- Reduction of AT&C losses
- Bring about Commercial viability
- Reduce outages & interruptions
- Increase consumer satisfaction

Considering the need for continuity and to rein in the losses of the utilities, need was felt to continue the initiative of APDRP in 11th plan which was termed as R-APDRP. On review of the status and benefits achieved of APDRP, it was felt that to have sustainable distribution business, it is essential to give impetus to IT enabling of the sector on an integrated platform. The IT platform shall assist in capturing and validating the energy and revenue model to gather in a transparent manner with accuracy. Also, considering the difficulties of domain expertise in IT area of the utilities and the experiences the utilities had, it was considered necessary to prepare SRS template, which shall provide the IT infrastructure for drawing the baseline data while addressing the need of IT back bone in the area of distribution business process to capture the benefits of the investments on sustainable basis.

RAPDRP (Part A) has been implemented in total 31 towns of UPCL to meet following objectives:

- a) Establishing base line data for accurate measurement of losses.
- b) Improving customer services which include projects for establishment of IT Infrastructure & deployment of applications like Meter Data Acquisition, GIS based electrical asset mapping and consumer indexing, Meter Reading, Billing, Collections,



- MIS, Energy Audit, New Connection, Disconnection, Customer Care Services, Web self-service etc.
- c) Under the scheme R-APDRP Part-A (IT) & IPDS IT Phase-II, the following IT Infrastructure had been setup in UPCL:
1. Data Centre at Dehradun
 2. Disaster Recovery Centre at Haldwani
 3. Customer Care Centre at Dehradun
 4. Modules implemented :
 - a. Metering
 - b. Billing
 - c. Collection
 - d. New Connection
 - e. Disconnection and Dismantlement
 - f. GIS based Customer Indexing and Asset Mapping
 - g. GIS based integrated Network Analysis Module
 - h. Centralized Customer Care Services
 - i. Management Information System (MIS)
 - j. Web Self Service
 - k. Identity and Access Management System
 - l. System Security Requirement
 - m. Development of Commercial Database of Consumers
 - n. Document Management System
 - o. Mail / Messaging System
 - p. Enterprise Management System and Network Management System
 - q. Antivirus & Firewall System
 - r. Data Warehouse System with MIS application
 5. Installation of modems at Feeders, Boundary Points & Distribution Transformers of the 31 Nos. R-APDRP Part-A towns and 36 Nos. IPDS towns.
 6. DGPS based GIS Survey for all towns coming under the R-APDRP & GPS based survey in IPDS towns.
 7. Deployment of IT Hardware and establishment of LAN, MPLS-VPN and other networking in all field offices of UPCL.
 8. Data Migration from existing applications and existing system of UPCL.

5. Scope of Work

The successful bidder, contractor, FMS & AMS Vendor, AMC vendor all terms are used interchangeably in this RFP/tender. The scope of work is divided into following:

- A. Continuity of the existing FMS services and management of IT infrastructure
- B. To provide the technical expert resources for maintenance of IT System installed at the Data Center (Dehradun) and Disaster Recovery Center (Haldwani), IT support resources at various field offices and Technical Support Resources for handling the application development work for functionality enhancement along with deployment of personnel to take care of Cyber Security needs.



- C. To provide the Annual Maintenance Support for Call Center Software for the period of 01 (One) year.
- D. To provision critical IT Hardware / Software on CAPEX & OPEX mode and commissioning it as per the requirement of UPCL.
- E. Integration of billing solution with AMISP's MDM/HES/WFM for smart metering implementation in UPCL.
- F. To carry out all the third-party integrations, migration, new developments and enhancements, etc.
- G. UPCL is in the process of finalizing agency to provide new billing solution with hardware refresh. Successful bidder shall support the new billing agency in data migration and UPCL third party integrations with payment gateways and AMISP's etc. The successful bidder shall share the billing data with new billing agency in agreed format.
- H. The UPCL reserves the right to modify the BoQ of this tender at the time of award of contract. These changes shall be discussed and agreed with the successful bidder.

A. Continuity of the existing FMS services

This section provides detailed scope of the FMS to be carried out by the selected agency during the FMS period. The work under FMS shall be measurable as per defined Service Level Agreements defined herein.

Bidder is responsible to provide Facility Management Service so as to manage entire IT system created across UPCL under different project like R-APDRP Part-A (IT), NON-RAPDRP and IPDS IT project including all equipment's, installations including hardware, software & networks and UPCL business related modules installed & commissioned at Data Centre and Disaster recovery Centre for the utility in order that they have maximum availability to enable utility to realize its desired business objectives.

All the maintenance activities including replacement/upgrade and administration activities such as server administration, application administration, Database administration, network component administration, Storage administration, Backup, replication etc., shall all be carried out by the selected agency during the period of engagement.

Selected agency to be called as FMS & AMS vendor shall also require to co-ordinate with existing OEMs/Vendors of all IT & other hardware equipment's for which UPCL has already tied-up or will be engaged during the contract period and have been exclusively excluded from the current scope of work.

System Management Services shall be provided by FMS & AMS vendor in such a manner that maximum uptime & performance levels of IT systems installed is ensured. As such, FMS is expected to provide services as per ITIL (IT Infrastructure Library) standards with performance levels meeting or exceeding those mentioned in Service Level Agreement (SLA) agreed between UPCL and FMS& AMS vendor.

FMS to be provided covers the following system, developed under RAPDRP Part-A (IT) /IPDS/ or by means of other software development works by UPCL



Software:

1. Metering
2. Billing
3. Collection
4. Disconnection and Dismantlement
5. New Service Connection
6. Customer Service and Call center software for operation of Call Center
7. Management Information System
8. Energy Audit
9. MDAS and Meter Data Management (Infinite/Secure)
10. Geographical information System
11. GIS based network Analysis System
12. Web Self Services
13. Identity and Access Management System
14. Network Management System

Hardware:

- Data Center's complete Hardware and software Management at Dehradun except SCADA/DMS Hardware & Software
- Disaster Recovery Center Hardware and Software Management at Haldwani except SCADA/DMS Hardware & Software.
- Providing Network Operation Center Services on 24x7 Basis at Dehradun and Haldwani.
- Helpdesk support System for ticket resolution of field users related to software and hardware installed at field locations
- Deployment of resources at various field offices to maintain the network, Desktop Services.
- Deployment of resources for Meter Data Acquisition System at Centralized Office Dehradun & Zone level to ensure healthy communication from Boundary Meters, Feeder Meters and inbuilt modem meters installed at various field locations.
- Deployment of Application Level Team who shall be responsible for configuration of changes in Electricity Tariff and related configuration in the system for all the commercial modules/mobile applications deployed in UPCL are in the scope of the bidder.
- All the modules levels integrations within the existing deployed applications and other application which UPCL envisaged during the contract period are in the scope of the bidder under Technical Support Services.
- All the other FMS related tasks applicable as per SRS document of the R-APDRP Part-A scheme/IPDS-IT etc. shall be in the scope of the bidder.

Detailed Scope of work to be performed by the FMS& AMS vendor as part of Facility Management Services (FMS)

FMS& AMS Vendor shall be responsible for 24*7*365 management of all the systems as per scope of work with services rendered at least as per Service Level Agreement between UPCL &FMS &AMS vendor. Scope does not include management of physical security for access to said facilities, Building Management System and other architectural and civil works.

a) Service Delivery Management:

Selected FMS& AMS vendor shall provide detailed description for service delivery management for the complete project as per his scope of work including transition plan, deliverables, and project management methodology within 15 days from the date of award.



b) Project Management

FMS &AMS vendor will assign a Project Manager who will provide the management interface facility and has the responsibility for managing the complete service delivery during the period of contractual arrangement with UPCL. Project Manager will be responsible for preparation and delivery of all monthly/weekly reports, management of Service Level Agreement (SLA) as well as all invoicing relating to the service being delivered under the contract.

Project Manager's responsibilities should essentially cover the following:

- i. Overall responsibility for delivery of the services under the contract
- ii. Management of Service Level Agreement (SLA).
- iii. Act as a primary interface to UPCL for all matters that can affect the Schedule of works and cost of the services under the contract.
- iv. Maintain all communications under FMS with UPCL.
- v. Provide strategic and tactical recommendations in relation to technology related issues
- vi. Provide escalation to FMS &AMS vendor's senior management, if required.
- vii. Resolve deviations from the phased project plan.
- viii. Conduct regularly scheduled status review meetings.
- ix. Review and administer the Change Control Procedure with UPCL
- x. Identify and resolve problems and issues observed and provide feedback to UPCL team.
- xi. To interact with other stakeholders i.e. AMC vendors and OEM's
- xii. Responsible for preparation and delivery of all monthly reports

c) Transition Management

During initial two weeks viz. initial period of taking over of Facility Management Services from the existing vendor, the FMS &AMS vendor should deploy all the required resources, monitoring software and other physical and technical requirements envisaged under the contract for running the system. During this period enterprise wide takeover of the system has to be done which includes Data Centre at Dehradun, Disaster Recovery Center at Haldwani, Network Operations in Dehradun and other related field activities.

After this period, FMS& AMS vendor shall provide minimum agreeable services under the contract. Formal SLA shall be enforced only after initial transition period.

d) Service Desk:

FMS& AMS vendor have to take over the existing service desk for managing events such as warnings, failure, tamper, alerts etc generated by the servers, network components etc. FMS& AMS vendor shall utilize help desk tools, which are ITIL complaint and are open for integration with other enterprise management tools like EMS/NMS system & messaging system for managing the events.

Responsibilities of FMS & AMS Vendor pertaining to Service Desk

i. Providing service desk solutions application

The Service desk module shall include the Solutions application. A solution record is a predefined response to a problem or commonly asked question. A solution record consists of a symptom, a cause and a resolution. Solutions can be associated with incident and problem records.



Solutions application is used to create, approve, and manage solution records. A separate application, Search Solutions, can be used to search for and view solution records.

The Solutions application includes the following features:

- Ability to specify which solution records should be available to self-service users in the Search Solutions application.
- Ability to specify a Classification for the solution.
- Ability to indicate a Status for a solution. A solution record can have one of the following statuses: DRAFT, ACTIVE, or INACTIVE.
- Ability to attach documents or Web sites to a solution record.
- Ability to use the Solutions application to change the status of a solution record.
- Ability to create, update and delete a solution in Solutions Application.

FMS& AMS Vendor shall integrate the service desk system with messaging system & EMS/NMS system.

Flow of Events shall be as follows:

Any event triggered should be forwarded to service desk that submits & updates trouble ticket & also updates status of ticket back to EMS/NMS. EMS/NMS operator should be able to generate tickets & forward it to helpdesk. Helpdesk personnel must also be able to update ticket to EMS/NMS.

ii. Providing service desk solutions application

Provide Level One Support for hardware and software, including incident logging assigning incident numbers and dispatching the appropriate support personnel or AMC vendor to remedy a problem;

- Prioritize problem resolution in accordance with the severity codes and Service Level specified;
- Provide system status messages, as requested;
- Maintain the defined service desk operational procedures;
- Notify designated personnel of systems or equipment failures, or of an emergency;
- Initiate a problem management record (“PMR”) to document a service outage to include (for example) date and time opened, description of symptoms, and problem assignment (Level Two/Level Three), and track and report on problem status, as required;
- Monitor problem status to facilitate problem closure within defined Service Level criteria or escalate, as appropriate;
- Monitor PMR closure, including documented problem resolution;
- Provide UPCL with complete and timely problem status through the problem Tracking system, as requested;
- Maintain an updated help desk personnel contact listing.
- Any planned outages shall be carried after due approval from the UPCL

iii. Management Services

- Assign priorities to problems, queries, and requests based on the guidelines/SLA provided by UPCL.
- Monitor and report to UPCL on maintenance vendor performance
- IMAC Services (Install Move Add Change)
- Act as the point-of-contact for install and MAC requests and status



- Act as the interface for coordinating and scheduling all installations and MACs.
- Install, Moves, Adds, Changes (IMAC) Services

This Service provides for the scheduling and performances of install, move, add, and change activities for Hardware and Software. Definitions of these components are as follows:

- **Install:** Installation of desktop machines, servers, peripheral equipment, and net work attached peripheral equipment, which form part of the existing baseline (new equipment needs to be procured by with installation services at the time of procurement).
- **Move:** Movement of desktop machines, servers, peripheral equipment, and Network attached peripheral equipment.
- **Add:** Installation of additional hardware or software on desktop machines and Servers.
- **Change:** Upgrade to or modification of existing hardware or software on desktop Machines and servers (e.g. Upgrade 2.4GB hard disk drive to 4.3GB). Requests for IMAC shall be prepared by FMS &AMS vendor depending on customer/System requirements & shall be approved by UPCL

iv. Asset/Inventory Management

As part of this activity, the FMS& AMS VENDOR's team will:

- Manage the vendors for escalations on support
- Logging calls and co-ordination with vendors
- Vendor SLA tracking
- AMC Tracking
- Management of assets sent for repair
- Maintain database of the various vendors with details like contact person, Tel. Nos., response time and resolution time commitments. Log calls with vendors Coordinate and follow up with the vendors and get the necessary spares exchanged.
- Analyze the performance of the vendors periodically (Quarterly basis) and submit the report to UPCL
- Provide MIS to UPCL regarding tenure of completion of AMC with outside Vendors for software, hardware & networks maintenance in order that UPCL may take necessary action for renewal of AMC. FMS &AMS vendor shall also provide MIS regarding performance of said vendors during existing AMC.

v. Network Monitoring & Management – WAN/VPN/Internet:

- To provide a single-point-of-contact for responding to UPCL network management queries or accepting its problem management requests. FMS &AMS vendor's network management specialist will respond to UPCL initial request within agreed service level.
- 24x7 Network Monitoring and reporting:



The FMS & AMS Vendor shall monitor the network on a continuous basis using the NMS and submit reports on a monthly basis with instances from the NMS system. System performance is to be monitored independently by the FMS & AMS Vendor and a monthly report mentioning Service up time etc. is to be submitted to UPCL.

The report shall include:

- Network configuration changes
- Network Performance Management including bandwidth availability and Bandwidth utilization
- Network uptime and downtime vendor wise
- Link uptime
- Network equipment health check report
- Resource utilization and Faults in network
- Link wise Latency report (both one-way and round-trip) times.
- Historical reporting for generation of on-demand and scheduled reports of Business Service related metrics with capabilities for customization of the Report presentation.
- Generate SLA violation alarms to notify whenever an agreement is violated or is in danger of being violated.
- Any other reports/format other than the abovementioned reports required by UPCL during the contract period.

vi. Data Centre Operations:

- Regularly monitor and log the state of environmental conditions and power conditions in the Data Center and gives feedback in case of abnormal conditions.
- Coordinate with UPCL and its vendors to resolve any problems and issues related to the Data Center related to environment conditions, power, air-conditioning, fire, water seepage, dust, cleanliness, etc.
- Co-ordinate with the UPCL for implementing any changes that may be required towards the placement and layout of infrastructure within the Data Center.
- Monitor, log & report entire equipment & module operation on 24x 7 x 365 basis
- Shall perform periodic health check-up & troubleshooting of all systems & modules installed & implement proactive rectification measures

vii. Server Administration / Management

FMS & AMS vendor will provide the server administration and monitoring service to keep servers stable, operating efficiently and reliably.

FMS & AMS vendor shall provide administrative support for user registration, creating and maintaining user profiles, granting user access and authorization, providing ongoing user password support, and providing administrative support for print, file, and directory, services.

Responsibilities under FMS includes:

- Setting up and configuring servers
- Installation of the server operating system and operating system utilities
- Reinstallation on event of system crash/failures
- OS Administration for IT system
- Manage Operating system, file system and configuration



- Ensure proper configuration of server parameters, operating systems Administration and tuning
- Regularly monitor and maintain a log of the performance monitoring of servers including but not limited to monitoring CPU, disk space, memory utilization, I/O utilization, etc.
- Regular analysis of events and logs
- Apply OS Patches and updates
- Monitor & verify logs files and periodically clean up log files
- Ensure proper running of all critical services on the servers. Schedule and Optimize these services
- Maintain lists of all system files, root directories and volumes
- Resolving all server related problems
- Escalating unresolved problems to ensure resolution as per the agreed SLAs
- Responsible for periodic health check of the systems, troubleshooting problems, analyzing and implementing rectification measures
- Logical access control of user and groups on system
- Responsible for managing uptime of servers as per SLAs

viii. Database Administration Services

- Undertake end-to-end management of database on an ongoing basis to ensure smooth functioning of the same.
- Undertake tasks including managing changes to database schemes, disk space, storage, and user roles.
- Setting and tuning system parameters to maintain the specified performance
- Building appropriate indexes, specifying large enough buffers and caches, aligning the database implementation with IT infrastructure, monitoring databases and applications, reorganizing databases, etc.
- Manage database upgrade or patch upgrade as and when required with minimal Downtime

ix. Backup/Restore Management

FMS &AMS vendor will perform backup and restore management in accordance with mutually agreed to backup and restore policies and procedures, including performance of daily, weekly, monthly quarterly and annual backup functions (full volume and incremental) for data and software maintained on Servers and storage systems including interfacing with UPCL's specified backup media storage facilities. FMS &AMS vendor shall ensure:

- Backup and restore of data in accordance to defined process / procedure.
- 24 x 7 support for file & volume restoration requests
- Maintenance and Upgrade of infrastructure and/or software as and when needed.
- Performance analysis of infrastructure and rework of backup schedule for optimum utilization.
- Generation and publishing of backup reports periodically.
- Maintaining inventory of onsite tapes.
- Forecasting tape requirements for backup.
- Ensuring failed backups are restarted and completed successfully within the backup cycle.
- Monitor and enhance the performance of scheduled backups



- Real-time monitoring, log maintenance and reporting of backup status on a regular basis.
 - Management of storage environment to maintain performance at optimum levels.
 - Periodic Restoration Testing of the Backup
 - Periodic Browsing of the Backup Media
 - Management of the storage solution including, but not limited to, management of space, volume, RAID configuration, configuration and management of disk array, SAN fabric / switches, tape library etc.,
 - Interacting with Process Owners in developing / maintaining Backup & Restoration Policies / Procedures
 - To provide MIS reports as per agreement
- x. Mail/Messaging System management**
FMS &AMS vendor will provide management of messaging systems, including administration of mail servers, monitoring performance, and management of user account, mailboxes, post office and address book, backup and archival management
- xi. Management of UPCL Enterprise Management System including Network Management, Monitoring & Performance Analysis (EMS & NMS system)**
FMS &AMS vendor shall also manage EMS & NMS installed in UPCL and shall extract information from EMS & NMS system to manage & administer LAN, WAN, Internet, servers, desktops, data Centre, database etc. EMS is installed at server room to manage Servers, Desktops, Data Back-up, Database, and event and compliance management. NMS tool has been installed for managing the Data Center LAN and WAN routed Traffic & to recognize common network problem, management of multi-vendor network with discovery, mapping and alarm tracking. NMS is also designed to provide network analysis module for switch fabric/CPUs, monitor utilization of switch resources & in isolating the network problems, provide performance monitoring, trouble shooting, capacity planning, and report generating of various statistics.
- xii. Performance Monitoring & Reporting**
Regularly monitor and maintain a log of the performance monitoring of servers including but not limited to monitoring CPU, disk space, memory utilization, I/O utilization, Central Storage etc.
Regular analysis of events and logs generated in all the sub systems including but not limited to servers, operating systems, databases, applications etc. The system administrators shall also ensure that the logs are backed up and truncated at regular intervals.
The administrators shall undertake actions in accordance with the results of the log analysis to ensure that the bottlenecks in the infrastructure are identified and fine-tuning is done for optimal performance
Reporting to utility for all system performance monitoring
- xiii. Maintenance and Operation of monitoring tools**
Role based access, User Creation, User Modification, Management of office hierarchy, new office creation, password policy etc are to be maintained by FMS &AMS vendor, all the request related to this will be sent by UPCL to NOC (Network Operation Centre) team and accordingly changes will be done by them. The upkeep, maintenance, backup, license policy management, usage etc is the responsibility of the vendor.



xiv. Necessary Communication facilities to interact with UPCL field units

FMS &AMS vendor has to provide minimum 2 Nos. of Helpdesk Telephone/Mobile numbers which shall remain active for 24x7 basis and UPCL field users can make call to any of the numbers. It is also desired FMS &AMS vendor shall also provide some digital platform through which it shall be easy for our field users to trouble shoot the issues first as their end it can one of the official authorised Whatsapp Group or any CHATBOT like services. IVRS Response actions shall be finalized by FMS &AMS vendor in consultation with UPCL.

xv. Application specific Support under FMS

Application side support and works to be performed by FMS &AMS Vendor includes the following:

- i. All the software modules developed under RAPDRP Part-A and thereafter during the support period along with the integrations done with other applications are running across the state of Uttarakhand and there is a requirement of day-to-day operational support from the agency to field users on call or at site. The role of agency is to provide the support to all field users for day-to-day operations in using the application and should resolve the issues faced by them. If immediate resolution is not possible then it should be locked as a ticket and to be resolved as per Service Level Agreement.
- ii. FMS &AMS vendor must be responsible for changes to be applied in commercial application due to change in regulation, tariff order or as per the requirement of management to improve the functioning of any business process of UPCL which does not involve any development side change and only includes minor changes in the process flow & any finetuning of existing report or development of new reports etc.
- iii. Testing of the development done & ensuring its movement in production environment will be the responsibility of the FMS &AMS vendor. Maintaining & upkeep of the version control shall also be in the scope of FMS &AMS vendor.
- iv. Testing environment shall be provided by UPCL in its Data Center, the FMS &AMS vendor have to maintain the same and the same needs to be used as platform for all the changes and development done in the system.
- v. The testing database has to be regularly updated as per the requirement. All the development activity has to be done in the testing environment and on approval from authorized UPCL officers, the same will be moved in production environment.
- vi. All the tariff changes have to be done by FMS &AMS vendor in the testing environment and for all the category & Sub-category of consumers. The Database administrator will apply these test cases once approved to production environment.
- vii. Continuous evaluation of the business process of UPCL to ensure smooth functioning and identify if there are missing gaps.
- viii. FMS &AMS vendor has to provide the support of Database Administrator (DBA) to generate/validate the data requirements, which is not possible from the user interface and are being required on daily basis.



- ix. The present applications of UPCL are also integrated with various outside third-party service software or specific software of UPCL for various purposes such as Automatic Meter Reading (AMR), Single Window Clearance System under Ease of Doing Business, Apuni Sarkar Portal of GoU, Android Mobile Based Billing, Solar Rooftop portal (USRP), Helpdesk System, Rural Feeder Monitoring System(RFMS), ERP System of UPCL etc. FMS &AMS vendor is also responsible for the upkeep of the system and resolve the issues observed in the integrated services immediately as per Service Level Parameters.
- x. Resolution of tickets as per Service level agreement. To record the end users of the system on daily basis have faced various problems and complaint will be locked in the application helpdesk or service desk support system of UPCL. All the tickets have to be resolved according to the priority assigned as per the service level agreement. FMS & AMS vendor is also responsible for raising the tickets to OEM helpdesk and to regularly follow up with them to resolve the issue and maintain their SLA as per UPCL existing contracts.
- xi. Tickets for which there is a requirement that a file needs to be replaced in the production environment then same will be done by FMS &AMS vendor after due approval from UPCL authorized officers and the source code should be maintained in the SVN server located at Data Centre.
- xii. All the changes in the source code should be tracked and maintained by the FMS &AMS vendor and it should be available for UPCL and AMC vendor for access as per decision of competent authority of UPCL.

B. To provide Technical Support Services including New Developments

- i. **Development of Web Services and Changes in the UPCL existing commercial application Modules, Call Center Software customization, WSS and Mobile Applications during the contract period:**
 - The system has to be upgraded with the advancement of mobile development works for the betterment in consumer services by UPCL & improvement in internal businesses processes.
 - To maintain the developed mobile apps as per the requirement of UPCL during the contract period and upkeep the system and provide necessary changes as per the User requirements.
 - To integrate the upcoming Smart Metering system of UPCL under RDSS, Mobile Billing Application for consumers and other upcoming system in UPCL during the contract period.
 - FMS &AMS vendor has to perform these tasks and develop the necessary web services required for integrating the newly developed system. Also due to change in regulation, change in business process and various other requirements from time to time, changes are required in the system. All these changes have to be done by FMS &AMS vendor as per the requirement of UPCL. The FMS &AMS vendor has to provide the adequate nos. of resources for this support tasks as technical support services under the contract. maintained and if there is requirement of new web service integration with existing system or any new system to be employed by UPCL in future, the same has to be done by the selected bidder.



- ii. **Changes in Admin Screen and providing front end interfaces to resolve the end user issues:** FMS &AMS vendor regularly check the end user problems reported in the helpdesk system and try to provide the interfaces at the front end or through admin screen to resolve the maximum possible issues especially repeated issues from the field users.
- iii. **Monthly Ledger Process:** FMS & AMS vendor will ensure to maintain the monthly ledger in the system and provide the monthly/daily balances to ERP System as per requirements.
- iv. **MIS (Management Information System);** MIS reports need to be streamlined as per the user specific requirement. All the reports as per the requirement form management needs to be provided and regularly updated in the system.
- v. **Provisions for Prepaid and Smart Metering (Automated Metering Infrastructure-AMI) :**UPCL is going to install smart metering system under RDSS and this system will work on prepayment mode, The required integration of this system needs to be done with UPCL commercial modules. FMS &AMS vendor must ensure timely development of the web services or API as per AMISP requirement on top priority so that project of smart metering could be completed within the expected timelines by UPCL. Any requirement of data migration appears during the contract for prepaid/Smart meter billing is in the scope of the vendor.
- vi. **Spot Billing Machine (SBM) related tasks**
 - About 5 Lakhs of consumers are being billed through spot billing machine in UPCL. The tariff in SBM is being updated whenever there is a change in tariff order, FCA rate change, Additional Energy Charge (AEC) or any other change observed in the tariff component or in business process of UPCL. The FMS &AMS vendor must provide support to end users in operating the Spot Billing Machines as per the requirement. It includes giving new tariff file, updating the same in system or through FTP or on any machines through helpdesk support is the responsibility of FMS &AMS vendor. The testing of SBM Bills after change in file is to be carried out each time and test results have to be submitted to concerned UPCL officers before moving to the production environment.
- vii. **Mobile Billing Related Works:**
 - About 15LAKHS of Domestic and Non-domestic consumers are presently billed through mobile app by third party agency. This system is integrated with existing MBC application deployed in UPCL. Raw data transfer for billing as per schedule and then downloading of billed data from mobile application Server to MBC application shall also be in the scope FMS &AMS vendor. This downloading of bills should be carried out daily as per the approved schedule with optimized performance. Smooth operation of this system is the responsibility of FMS &AMS vendor. The new location, if added for the billing through mobile application the necessary changes shall be done by FMS &AMS vendor. FMS &AMS vendor shall also be required to validate these two systems on regular basis such that, there should be no mismatch. Periodic checking of bills from all the system should also be done from time to time.



- Necessary change needs to be done to improve these systems, if changes are required in the web service or any changes in the core applications. All these tasks have to be carried out during FMS contract period.
- If UPCL hires new billing vendors for the spot billing through mobile/smart machines, the same has to be integrated with UPCL MBC/Mobile billing applications as per the requirement of UPCL. If any service levels are defined under the contract for billing vendor, the same has to be calculated through the system and provided to UPCL as per requirement during the contract period.

viii. Regular Monitoring of Commercial Data

Commercial applications are the core business applications of UPCL and they take care of entire UPCL revenue system. The following shall be the scope of work of FMS &AMS vendor to take care of monitoring of UPCL commercial processes:

- **Monitoring of monthly collection and its posting in the ledger from all applicable modes such as cash, cheque/draft, NEFT/RTGS and all kinds on digital modes:**
FMS &AMS vendor is responsible for monitoring of daily collection from all modes of payment and should reconcile the same on daily basis. This includes reconciliation up-to the payment posting in ledger with accounting of the same. FMS &AMS vendor shall highlight if there is any mismatch and shall report to UPCL concerned officer on immediate basis. Division-wise end to end reconciliation of centralised online collection should be made available in MIS / collection module.
- **Monitoring of Billing:** FMS & AMS vendor should check the progress of daily billing and ensure that all bills (SBM, Mobile, system, revised bill or any other mode to be integrated in future) should be posted accurately in the system along with its proper accounting. Reconciliation should be done on daily and monthly basis for its timely rectification in case of any mismatches.
- **Scheduler Monitoring:** FMS&AMS vendor should ensure that all the schedulers developed in the system shall run as per UPCL approved scheduler methodology and there should not be any gap in the system due to missing/failure of any scheduler. All the online payments, NSC payments, Bill payments, provisional Scheduler, Billing scheduler, reports scheduler, MIS scheduler etc should be monitored and compliance of the same should be submitted to UPCL IT team on weekly basis. In case of any failure the FMS NOC team shall ensure to run the failed scheduler on manual mode and ensure data consistency and integrity.
- **Report Generation as per the requirement:** From management side frequent requirement arises for generation of reports from the system that is not available at front end in specified formats from time to time. These reports should be generated and submitted to UPCL after performing the requisite testing.
- **Database Performance Optimization:** Database optimization of the commercial application to meet the performance as specified in SRS & UPCL approved Database Maintenance Methodology should be done on regular basis. Performance tuning, back up of data, archiving of data etc is to be done at regular intervals for optimum performance.

ix. MIS Database monitoring and processing

For Management Information System (MIS) data processing will happen on daily basis and updated database will be available for MIS application to extract the report. The maintenance, upkeep, optimization, backup etc. is to be done by the FMS &AMS vendor.

x. Meter Data Management

The Meter Data Management (MDM) application had been provided under RAPDRP Part- A IT Implementation project as per the scope specified in SRS. This system is presently running in integrated environment. It is to be maintained and optimized under FMS. The data from AMR is to be captured and accordingly sent to Energy Audit and GIS for various services. Monthly energy Audit, various reports to National Power Portal (D1-D7 formats), SAIFI, SAIDI etc are generated with the help of MDM. The complete maintenance, up gradation, upkeep of the MDM system lies with FMS &AMS vendor along with field related activities as mentioned above.

xi. Energy Audit

- The Energy Audit module is running in integrated environment with UPCL revenue management system (i.e. MBC etc), GIS, MDM etc. FMS &AMS vendor has to ensure the smooth running of the Energy Audit modules and takes care of all the requirement of Nodal Agency of Uttarakhand i.e. M/s Power Finance Corporation Ltd. The data should be seamlessly uploaded to all the destination portals on monthly basis or as per the requirement. There are frequent minor changes that have to be done in the Energy Audit module to keep up the system in accordance with the requirement of UPCL and Ministry of Power so FMS &AMS vendor has to ensure the compliance as desired.
- The work of Energy Audit of Rural Feeders by uploading the Feeder Meter Data from Rural Feeder Monitoring System (RFMS) of M/s RECTPCL to Energy Audit module of UPCL's IT system is in progress and shall be accomplished shortly. The upkeep of integration done and generation of Rural Feeder Audit loss reports from the system shall also be in the scope of FMS &AMS vendor.

xii. Geographical Information System (GIS)

Following activities has to be performed by the FMS &AMS vendor with respect to GIS

- FMS &AMS vendor has to ensure to provide the ticket logging system which will takes care of all the GIS related tickets separately from the commercial tickets and resolve the same as per the service level defined in the service level agreement.
- Since GIS is a highly specialized subject so a lot of support is frequently required from helpdesk team for GIS related activities, helpdesk team needs to provide this handholding to all the UPCL users as per their requirement.
- Resolution of bugs related to GIS and new patch upgradation should be done by FMS &AMS vendor during the support period.
- Integration with CA, NA, MDM, and other R-APDRP modules are already there in the system. Any changes observed or problems faced should be resolved by the FMS &AMS vendor.
- To update the web Applications/Desktop applications vis-à-vis new functionality requirements arising with proper integration with CA, NA, MDM, and other R-APDRP modules



- All Backend activity including GIS bulk updates with proper syncing of GIS data with other R-APDRP modules.
- Backup schedule is to be defined as defined for other modules with backup of GIS delta changes every day and backup of complete data on a weekly basis on a scheduled time.

xiii. UPCL Website

UPCL website developed under “Wordpress” CMS using “MySQL” as DB. The website works independently of WSS and is not integrated with CA database. However, it contains all the links (URL Forwarding) available under WSS portal like bill payment, consumer login etc. The website contains project, scheme related and other information related to all the departments of UPCL. It's a bi-lingual website and complies with GIGW guidelines. The detailed scope of work regarding website is as below:

- Configuration / operations of secondary redundant server.
- All the tasks related to server / application / DB maintenance and backup.
- Performance tuning of website for improving the browsing experience.
- Enablement of chatbot on UPCL website.
- Ensuring the 100 % availability of website.
- All the works related to website including updation, maintenance, new development, bug fixing of website for both Hindi and English version.
- Integration with upcoming applications.
- Security audit patching work to be done as per recommendation received from security auditor.
- Development of additional pages in CMS as & when required.
- Ensuring the compliance to the GIGW guidelines while designing new pages.
- Ensuring cross browser compatibility of website.
- Ensuring website is completely responsive with other devices viz. mobile, tablet, etc.
- Ensuring that all the new developments are Unicode & W3C complaint.
- Redesigning and re-arranging of existing web pages of UPCL website as per requirement.
- Improvement of look and theme of website as desired by UPCL for making it visually appealing with comprehensive, well mapped & easily navigated by the users of the website.
- Redevelopment in present CMS or upgradation to Java /angular based website including CMS.
- APIs or web services implementation, if required, for data exchange with other data sources / application.
- Creating role-based access for UPCL users to update specific section of website.
- User should be able to add, edit, update and delete website pages, colors, text & images, menu structure as per the permission assigned.
- Admin should be able to create & manage the new role and user along with assigning privileges to users.
- Admin should be able to fetch log for all the users for all insert, update and delete along with details
- Designing new pages / functionality as desired by UPCL.



xiv. **Web Self Service (WSS) Portal**

The portal is developed as a self-service portal for UPCL consumers. The portal is upgraded recently under Angular framework. Here all the information / facilities required to the consumers are available on this portal. The portal communicates with CA database to fetch / write the consumer details and with external services for online payment services and other required stockholders. WSS portal contains consumer login facility to enable the consumer for new connection application, fetch his/her bill history, payment history, complaint/request registration and status tracking including load/consumption calculator, all type of payments. The portal is also integrated with external websites for data sharing like Single window (investuttarakhand), apunisarkar portal, smart city etc.

Scope of work for Web Self Service (WSS) portal:

- Improvement in look and theme of the portal.
- Designing of new pages and functionality as per the requirement of UPCL.
- Any changes required in the front end of WSS webpage including appearance and logic.
- Development of additional facilities for consumers.
- Performance tuning of portal to optimize the pages.
- Introducing browser/cross platform compatibility.
- Fetching the log of all the admin users.
- Ensuring 100 % availability and backup management of WSS including DB and Application server.
- Role based access to users.
- End to end reconciliation of the payments received through web services upto consumer ledger.
- End to End support required for operation and implementation of online payment system including new integrations, troubleshooting /bug fixing, improvement and development as per requirement.
- All the external integrations as per the requirement.
- Troubleshooting and bug fixing of functionality currently available on WSS portal
- Improvement / introduction of new payment options in WSS portal and consumer app.
- Integration of wss and consumer app with other PGs for bill payment, NSC and miscellaneous payments.
- Integration with BOU at NPCI for BBPS payments.
- Consumer mobile app also needs to be integrated with PGs for enabling the facility of UPI and QR mode.
- Development of all the reports related to functionalities available at WSS portal as per format provided by UPCL.
- Security Audit Patching as per recommendation of security auditor
- End to end report development for reconciliation of digital payments upto consumer ledger.
- Development of admin portal



- Development of compensation complaint flow including reports as per the format provided by UERC and decided by UPCL.
- Development of online recharge facility on WSS portal and consumer app.
- Integration with SMS gateway /troubleshooting/ reports development of SMS services of UPCL.
- Mapping of deployed Point of sale (POS) machines at cash counters in Divisions/sub-divisions with collection module.
- All new functionality development as and when required including coordination and support related to other CA modules.
- Payment updation screen modification for centralized updation of mismatch payments if required.
- End to end recon of all the payments through different modes will be the responsibility of FMS &AMS vendor.

xv. UPCL Mail services

UPCL is using HCL Verse for providing mail services to UPCL employees. will be required to FMS&AMS vendor manage the email services end to end, including creation of new mail id's, backup management, archival servers/services, security, report generation as per requirement.

xvi. Upgradation of mobile applications

To meet the standards of performance and expectation of consumers, use of mobility in the system needs to be enhanced. UPCL has developed the consumer-oriented service commercial process in mobile platform so that UPCL user can access application at their ease and can execute their work. Following are the basic requirement for the upgradation of mobile application covered under the scope of work

a. Billing Mobile Application:

- Billing application is available for processing the bills at site from the MBC application. Application is able to generate the bills at site for all type of consumers and these applications should be updated according to the latest tariff order or other corporation order released from time to time during the contract period. Application should exactly match with the logic of MBC application of UPCL.
- Any new feature or upgradation of feature as per requirement should be developed by the vendor in the billing applications during the contract period as per the agreed timelines.
- The Security upgrades as per the auditor requirement or as per the policy should be applied on the mobile applications by the FMS &AMS vendor during the contract period.
- Application uptime required should be more than 98% during a month excluding the approved downtime taken for up gradation and backup after due approval from UPCL.



b. Meter Change & Check Meter Mobile Application

- The real time meter change information should be updated in the MBC system along with the images.
- Any new feature or upgradation of feature as per requirement should be developed by the vendor in the metering applications during the contract period as per the agreed timelines.

c. Work Force Management Mobile application.

- This is the comprehensive mobile application in which all the features of new connection, disconnection, complaint handling, collection and other features has been provided. The application should be maintained and upgradation if any required during the contract period should be done by FMS &AMS vendor.
- Any change due to change in regulation or change in business process by UPCL has to be accommodated in the application and if any web service upgradation is needed, the same has to be done in the system.

C. Annual Maintenance Support

i. Annual Maintenance support for Call center software

To provide the Annual Maintenance support for Call center software installed in UPCL. The broad work covered under the AMC works are as under:

- Database Monitoring of database and application Parameters.
- Upgradation of Application and Database as per requirement.
- Administrator Training for smooth operation of software.
- Data archiving and Data retention as per UPCL policy
- To assist NOC team for Backup Plan, in case of any failure.
- Data restoration activity whenever required by UPCL.
- Updating the latest version of Call center software
- Necessary support for updating latest Operating System & Database
- Timely support, Upgrade and patches update
- Any other activity required to be done to maintain the SLA.

Bidders are required to get the relevant details from UPCL before making their proposal in this regard.

D. Mobile App maintenance and enhancement

i. Updation/support/enhancement in all the existing mobile apps.

- Mobile application for billing is developed for spot billing of consumer in online mode. Mobile APP need to be redeveloped to allow bill generation in offline mode to the third party or UPCL employee as per UPCL requirement.
- Providing support for updating / creation / deletion of new users for the mobile billing agency deployed/to be deployed by UPCL.
- This downloading of offline bills should be carried out daily as per the approved schedule with optimized performance. Smooth operation of this system is the responsibility of FMS &AMS vendor.
- The new location, if added for the billing through mobile application the necessary changes shall be done by FMS &AMS vendor.



- If any service levels are defined under the contract for billing vendors, the same has to be calculated through the system and provided to UPCL as per requirement during the contract period.
- Necessary change needs to be done to improve these systems, if changes are required in the web service or any changes in the core applications. All these tasks have to be carried out during FMS contract period.
- The scope for consumer app includes technology upgrade, additional feature development, development of iOS version, provisioning of new connection registration and acceptance of all kind of payment in sync with web self service portal, admin dashboard etc.
- The successful bidder shall also make necessary enhancements for supporting integration with AMISP for smart metering.

E. Critical IT Hardware / Software on CAPEX & OPEX mode and its commissioning as per the requirement of UPCL

- a. The FMS & AMS vendor shall provide the critical IT hardware and software on CAPEX & OPEX mode as indicated in the Schedule of rate/Bill of Quantity (BoQ) of the tender.
- b. The FMS & AMS vendor shall provide the implementation plan for supply, installation and commissioning of all hardware / software under this contract along with migration of existing billing databases and applications.
- c. The FMS & AMS vendor shall provide the servers (RISC and Xeon) with virtualization software with three years support.
- d. The successful bidder shall deploy on site dedicated team experienced in IT-Infra upgradation and migration activity.
- e. The successful bidder shall provide the hardware and software with technical compliance detailed as **Annexure-8**.
- f. The details of the existing running application is enclosed as **Annexure- 7**.
- g. The successful bidder shall study the existing running application with UPCL and shall prepare detailed plan to move/migrate existing application to new hardware.
- h. UPCL also have the application which shall run on the existing hardware but storage shall be migrated to new storage. The successful bidder shall also migrate the mount point and data of these applications to new storage.
- i. The work also includes the creation of VMs, OS installation, application software installation etc. which are required to migrate the existing applications to new hardware.
- j. **The successful bidder shall sign non-disclosure agreement with UPCL.**
- k. UPCL existing billing application solution is running on multiple servers. The successful bidder shall migrate these applications to new hardware detailed in the tender.
- l. The successful bidder shall migrate the existing database to new RISC server.
- m. The successful bidder shall test and commission the UPCL existing application with database to new hardware (server and storage). UPCL team shall provide the necessary support for the same.
- n. The successful bidder shall deploy the necessary software/tools to migrate the existing billing data, application data to new storage system.
- o. The successful bidder shall manage the new storage and provision the data to various application as per requirement.
- p. Necessary downtime for the migration of databases and other activity shall be provided by the UPCL. However, in view of the criticalities of the services, these downtimes shall be mostly provided on late night hours and on week off.
- q. UPCL is using SAP ERP application and UPCL have its customized legacy application which shall be sunset after complete implementation of SAP application. The



successful bidder shall provision and migrate UPCL legacy application to new hardware/storage. Customize application is built on Oracle architecture. Database Oracle 10g and Oracle Application Server 10g. UPCL shall provide necessary support to bidder for migration of UPCL legacy application to new hardware. The existing environment is as following:

- i. Database server- HP rp 3440 server with 4 GB RAM on HPUX 11.23
 - ii. Application Server- IBM eSeries Xeon server with 4 GB RAM
- r. The successful bidder shall supply, install and commission the new storage (as indicated in the Bill of Quantity) in UPCL Data Center, Dehradun and Disaster Recovery Center, Haldwani. The proposed new storage by bidder shall be connected with existing redundant SAN switches of UPCL. The bidders are requested to check the compatibility of the proposed storage with the UPCL SAN switch. The details of the SAN switches are as following:

Data Center Dehradun

Product	Description	Qty
2054-E07	Cisco MDS 9509 Director	2
	48-Port 4 Gb FC Switching Module	4
	18/4 Multiservice Module	2
	Tri-Rate LW SFP Transceiver	8
	FC Port 4 Gb SW SFP Transceiver - 4 Pack	58
	25m 50u LC/LC Fibre Cable - 4 Pack	58
	MDS 9500 FCIP Activaton for 18/4	2
	Power Cord, South Africa, 250VAC 20A	4
	Plant Install 9509 in 2109-C36	2

Disaster Recovery Center, Haldwani

Product	Description	Qty
2054-E07	Cisco MDS 9509 Director	2
	4-Port 10 Gb FC Switching Module	1
	18/4 Multiservice Module	1
	48 Port 8Gb Adv. FC Module	2
	FC 10Gb 40km ER X2 Transceiver	4
	Tri-Rate SW SFP Transceiver	4
	FC Port 4 Gb SW SFP Transceiver - 4 Pack	4
	25m 50u LC/LC Fibre Cable - 4 Pack	29
	FC 8Gb SW SFP+ Transceiver - 4 Pack	24
	MDS 9500 FCIP Activaton for 18/4	1
	Supervisor-2A Modules (2) - Plant	1
	Power Cord, South Africa, 250VAC 20A	2
	Plant Install 9509 in 2109-C36	1
	4-Port 10 Gb FC Switching Module	1
	18/4 Multiservice Module	1
	48 Port 8Gb Adv. FC Module	2
	FC 10Gb 40km ER X2 Transceiver	4
	Tri-Rate SW SFP Transceiver	4
	FC Port 4 Gb SW SFP Transceiver - 4 Pack	4
	25m 50u LC/LC Fibre Cable - 4 Pack	29



- s. The successful bidder shall be responsible to replicate data from the new storage proposed in the Data Center Dehradun to another new storage proposed in the Disaster Recovery Center, Haldwani using the existing point to point leased lines.
- t. Successful bidder shall retrieve the data from the new DR storage and provide the same to UPCL, as and when required by the UPCL.
- u. Successful bidder shall also configure the servers of the DR Center Haldwani to enable them to connect with new storage.
- v. The successful bidder shall provide cloud storage of 30 TB (usable) from MEITY empanelled cloud service provider for storing backup of important application from UPCL Data Center to Cloud location. The necessary setup required for this shall be implemented by the successful bidder, in consultation with UPCL. Internet connectivity for this activity shall be provided by the UPCL.
- w. UPCL may ask the successful bidder to retrieve the data from the cloud twice in a year for the verification purpose. The bidders are requested to take cost of the same in the tender.
- x. The successful bidder shall ensure that the data transferred to cloud storage in the encrypted form to maintain the confidentiality of the data.
- y. The software required to copy the backup to cloud location shall be provided by the successful bidder.
- z. The successful bidder shall provide the monitoring software, backup software, Server Cyber Security Software and identity and Access Management software to UPCL as per the required specification. The successful bidder shall be responsible for the supply, installation and commissioning of the same as per UPCL requirement. The successful bidder shall also import the data from the existing IDAM solution to new IDAM solution for seamless usage.
- aa. The successful bidder shall configure the backup software to take backup of all critical database of billing solutions along with backup of application servers. The details of the same shall be discussed and finalized with successful bidder at the time of implementation.
- bb. Successful bidder shall be responsible to overall migration of all the required application to new hardware in all respect and to the satisfaction of the UPCL. This include storage and mount point migration of all applications presently connected with IBM storage to new storage in DC and DR. Installation of virtual machines in new servers, OS installation, application software installation, testing and commissioning work.
- cc. In case bidder require any specific hardware/software to complete the activity to the satisfaction of UPCL, the bidder shall arrange the same at their own. UPCL shall provide the OS, application software and necessary documentation of the same. However, it is bidder responsibility to configure, test and commission the entire application stack.
- dd. The successful bidder shall keep the record of all the licenses usage in UPCL for billing solution against the present licenses. In case of any over usage / new requirement of licenses shall be discussed and informed timely to UPCL.
- ee. The successful bidder shall supply, install, test and commission the server security software in specified servers of UPCL to protect these servers from the cyber threats.
- ff. The successful bidder shall provide the new Identity and Access Management (IAM) Software for UPCL billing Solution. The installation, testing and commissioning of the new IAM software shall be the responsibility of the successful bidder.
- gg. The successful bidder shall be responsible for usage of software / licenses supplied against this tender.
- hh. The successful bidder shall also be responsible to integrate and successfully run the new IAM software with present billing application of UPCL.



- ii. UPCL is presently using the Radware load balancer. Successful bidder shall install, test and commission the new load balancer/WAF as per the present UPCL environment. The successful bidder shall also configure WAF features for UPCL application as per requirement.
- jj. **The successful bidder shall arrange training to use the server protection software, backup software and load balancer/WAF to FMS team and UPCL users.**

6. Resource Deployment Requirement under Facility Management and Service Management:

- i. The FMS & AMS vendor shall deploy adequate number of personnel for providing Facility Management services in each shift of the day at Dehradun Data Center, Disaster Recovery Center at Haldwani, various site offices of UPCL and at their office in Dehradun.
- ii. FMS & AMS vendor has to maintain an office in Dehradun with all the communication facility with adequate number of resources for communication with UPCL.
- iii. Successful bidder shall deploy some resources in their local office. UPCL may call these resources as and when required in UPCL office and inspect the successful bidder office as per requirement. The resource deployment plan in the UPCL and successful bidder office shall be decided later at the time of deployment.
- iv. There shall be one Project Manager responsible for overall resource management at Data Center, DR Center, various site locations and offshore support resources and he/she must be available for all meetings/discussions on the day to day issues and on call in case of emergent requirements.
- v. The FMS & AMS vendor shall be required to depute on-site personals to meet the Services requirement as described above.

- **Onsite Service Engineers**

Shall be required to undertake the responsibilities of System Administration, Database Administration, Security management, Network Administration, Application development etc. and troubleshooting of multi-brand Hardware.

The FMS & AMS vendor shall be required to deploy resource as detailed below in clause 6.1 who shall be responsible for day-to-day operations (including applications/ mobile app development, server and network monitoring, storage and backup administration, security etc.), in each shift on all days of the week on 24x7 basis. However, vendor is free to provide resources in addition to minimum requirement as per tender document in order to maintain the required SLA parameters.

6.1 General qualification and experience of resource persons:

The engineers deployed for the job must have suitable qualification, experience and certification for the assigned job as described in Clause 6.1 (ii) below. If the service of particular personnel is not satisfactory, UPCL may ask for the suitable replacement and the FMS & AMS vendor shall be required to provide the replacement of resources within a period of 1 month from the date of the notice.



i. Resource requirement under the scope is as tabulated below:

SN	Particulars (Type of Work/Resources)	Unit (no.)
A	IT Team to Manage Data Center, Dehradun (DC) and Disaster Recovery Center, Haldwani (DR) for Operational Activities	
1	Management of Servers at Data Center , Dehradun and DR Center, Haldwani (Windows/Linux/VM)	3
2	Security administrator (Antivirus/Firewall, Sophos/Mail)	2
3	Monitoring Tools (Network , server, LDAP etc.)	2
4	Backup (Backup software , Storage, SAN Switches and Tape Library)	1
5	Network Admin at DC and DR (Routers, Switches , VPN and Internet)	3
6	Database Administrator at Data Centre, Dehradun	2
7	Database Administrator (Offshore)	1
8	Load balancer Engineer	1
9	Call Center Operation Engineer (CUCM, SYNWAY Media Gateway/ SIP)	2
10	24x7 Network Operating Center at Data Center, Dehradun - Helpdesk including reliever	4
11	Application Support Team at Network Operating Center at Data Center, Dehradun	3
12	24x7 Network Operating Center at Disaster Recovery Center, Haldwani - Helpdesk including reliever	4
13	IT Support Staff at field Offices	18
14	Project Manager	1
	Sub Total (A)	47
	B- Application Development Team	
1	Application Developer for CSC/MIS	1
2	Application Developer for CSC/MIS (Offshore)	1
3	Application Developer for WSS	2
4	Application Developer for New Service Connection	1
5	Application Developer for Metering/DND/Collection	2
6	Application Developer for Billing	2
7	Application Developer for Billing (Offshore)	1
8	Application Developer for Energy Audit	1
9	GIS Developer for ARC-FM & ARC-GIS	1
10	Developer for UPCL website	1
11	CA Application Developer for Mobile(Functional & Admin)	1
12	CA Application Developer for Mobile(Functional & Admin) (Offshore)	1
13	Application Manager for complete suit	1
14	Business Analyst	2
15	GIS Executive	2
16	Angular Application Developer	1
17	Angular Application Developer (Offshore)	1
18	Application Tester for New Development	2
19	Application Tester for New Development (Offshore)	2
	Sub-total (B)	26
	Total Resource Deployment (A + B)	73



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Note: -

- **All the statutory guidelines of Govt. Of Uttarakhand for payment of Salary, medical, EPF, ESI etc. shall be adhered to by the FMS & AMS vendor strictly as per the prevailing rules and regulations. Payments wherever needed to be deposited to the applicable statutory authorities shall be the responsibility of the selected agency.**
- **It is the responsibility of the selected agency to submit the details of contribution pertaining to EPF, ESI etc. of the resource deployed to the concerning authorities and also to UPCL along with the invoices.**

UPCL



ii. Experiences of the resources to be deployed as per above (CV of each proposed resource to be submitted as per Form 8 along with Bid):

S No	Type Of Resource	Educational Qualification	Relevant Experience	Job Responsibilities
A Experience of IT team to Manage Data Center Operational Activities				
1	Management of Servers at Data Center, Dehradun and DR Center, Haldwani (Windows/Linux/VM)			
	LINUX ADMIN	Bachelor/Master degree in CS/IT i.e. (MCA/BTech/ BCA/ MSc-IT/BSc-IT) Additional Microsoft Certification (MCSE)/Linux Certifications will be preferable.	<ul style="list-style-type: none"> • Minimum 4 year working experience in Linux Administration as Linux Administrator. • Experience with Linux servers in virtualized environments also. knowledge of protocols such as DNS, HTTP, LDAP, SMTP and SNMP Experience of installation, configuration, management and monitoring of Windows / Linux based servers with high availability solutions like clustering / load balancing of servers, server virtualization. • Working experience in DC environment will be preferable. 	<ul style="list-style-type: none"> • Responsible for to Manage, coordinate, and implement software upgrades, patches, hot fixes on servers, workstations, and network hardware for Linux OS installation, Software and Patch management. • Debugging and troubleshooting memory issues. • Configuration and maintenance of Linux Servers and Network hardware and peripherals. • Install and maintain all server hardware and software systems, as well as manage server performance and availability • Fault finding, analysis and of logging information for reporting of performance exceptions. • Proactively monitoring system performance and capacity planning
	WINDOWS ADMIN	Bachelor/Master degree in CS/IT i.e.(MCA/ BTech/BCA / MSc-IT/BSc-IT)Additional Microsoft Certification (MCSE)/ Linux Certifications will be preferable.	<ul style="list-style-type: none"> • Minimum 4 years of experience in Windows Server 2008-2012-2016,2019 DNS, ADC, Antivirus etc. • Strong knowledge of installation, configuration, Management and Monitoring of Windows based Servers with high availability solutions like clustering / load balancing of servers, Server Virtualization Knowledge of administration and management of Windows based Servers. • Knowledge of IIS Web Server for successful running & administering WWW, FTP, SMTP etc. services on production environment. • Working experience in DC environment will be preferable. • Advanced knowledge of system vulnerabilities and security issues. 	<ul style="list-style-type: none"> • Responsible for the maintenance, configuration, and reliable operation of computer systems, network servers, and virtualization. • Install and upgrade Server components and software, manage virtual servers, and integrate automation processes. • Troubleshoot hardware and software errors by running diagnostics, documenting problems and resolutions, prioritizing problems, and assessing impact of issues. • Responsible for capacity, storage planning, and database performance • Monitors and maintains Windows Server OS and additional server components including but not limited to IIS, SMTP Services, Active Directory, SQL Server, and ASP.net hosted applications. • Monitors and reviews system logs and detects and troubleshoot problems. Writes technical system operations documentation.



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S No	Type Of Resource	Educational Qualification	Relevant Experience	Job Responsibilities
	VM ADMIN	Bachelor/Master degree in CS/IT i.e. (MCA/BTech /BCA/ MSc-IT/BSc-IT) Additional Microsoft Certification (MCSE) / Linux Certifications / equivalent certifications in cloud will be preferable.	<ul style="list-style-type: none"> • Minimum 4 years Working Experience in VMware environment • Good Understanding of virtualization technology i.e. Virtual Center, VMotion, VSphere, VMware ESXi, Client OS, IT Infrastructure • Working experience in DC environment. Virtualization system Administration will be preferable. 	<ul style="list-style-type: none"> • Managing VMware vSphere 5.5/5.6/6.5/6.7 infrastructure VM templates creating and cloning. • P2V, V2V machine migration Provisioning Virtual machines based on Project requirements • Managing BE Utility and creating VMs from recovery points. • VMware Managing virtualization VMware vSphere 5.x and vSphere 6.x environments. • Installation and configuration of ESXi servers from scratch. • Familiar with appropriate baseline creation and Hosts and VMs patching using Update Manager. • Upgrading VMware tools and VM hardware as and when required. • Worked on Host profiles and implemented this on newly added hosts in our environment, Configuring roles/user accounts and providing the users with appropriate access on vCenter servers. • Configuring Virtual Switches for ESXi hosts for respective networks, testing and implementing in production environment. • Daily Health checks and Performance of the VMware infrastructure
	Security admin (Antivirus/ Firewall, Sophos)	Bachelor/Master degree in CS/IT i.e. (MCA/BTech /BCA/ MSc-IT/BSc-IT) Base-level Security/Network Certification / CCNA will be preferable.	<ul style="list-style-type: none"> • Minimum 4 years of experience in a network Security administration role. • Knowledge of common L4-L7 protocols such as SSL, HTTP, DNS, SMTP and IPSec • Strong understanding of firewall technologies • Juniper/Cisco/Sophos • Packet Shaper, Load Balancer and Proxy Server knowledge • Intermediate to expert IDS/IPS knowledge • knowledge TCP/IP, computer networking, routing and switching Network protocols and packet analysis tools • Knowledge of Windows, UNIX and Linux operating systems • Firewall and intrusion detection/prevention protocols. • Working experience in DC environment will be preferable. 	<ul style="list-style-type: none"> • Should have responsibility of overall security implementation for DC, DR and UPCL offices. • Shall study the existing setup and help in preparation of security policy document. • Shall look after the security/network aspects of new projects/implementation during the FMS period by UPCL. • Defend systems against unauthorized access, modification and/or destruction. • Perform vulnerability and networking scanning assessments • Monitor network traffic for unusual activity, Configure and support security tools such as firewalls, anti-virus software, patch management systems, etc. • Implement network security policies ,application security, access control and corporate data safeguards • Analyze and establish security requirements for your networks • Manage Training calendars for team/ UPCL employees in security awareness and procedures. • Develop and update business



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S No	Type Of Resource	Educational Qualification	Relevant Experience	Job Responsibilities
				<p>continuity and disaster recovery protocols</p> <ul style="list-style-type: none">• Conduct security audits and make policy recommendations• Provide technical security advice, Perform vulnerability and penetration tests across all network segments• Monitor network traffic for suspicious behaviour, Configure security systems such as firewalls, antivirus, and IDS/IPS software• Create network policies and authorization roles for file access <p>Analyse current security requirements and make suggestions for improvements.</p>

S No	Type Of Resource	Educational Qualification	Relevant Experience	Job Responsibilities
2	Senior Security Admin (Antivirus/Firewall, Sophos)	Bachelor/Master degree in CS/IT i.e (MCA/BTech /BCA/ MSc-IT/BSc-IT) Base-level Security / Networking Certification / CCNA. Will be preferable.	<ul style="list-style-type: none"> • Minimum 6+ years' experience in a network Security administration role • Knowledge of common L4-L7 protocols such as SSL, HTTP, DNS, SMTP and IPsec etc. • Strong understanding of firewall technologies • Packet Shaper, Load Balancer and Proxy Server knowledge • Intermediate to expert IDS/IPS knowledge • knowledge TCP/IP, computer networking, routing and switching Network protocols and packet analysis tools • Knowledge of Windows, UNIX and Linux operating systems • Firewall and intrusion detection/prevention protocols • Knowledge of Networking Protocols • Knowledge of troubleshooting and Management of Network technologies • Working experience in DC environment will be Preferable. 	<ul style="list-style-type: none"> • Should have responsibility of overall security implementation for DC, DR and UPCL offices. • Shall study the existing setup and help in preparation of security policy document. • Shall look after the security /network aspects of new projects/implementation during the FMS period by UPCL. • Defend systems against unauthorized access, modification and/or destruction. • Perform vulnerability and networking scanning assessments • Monitor network traffic for unusual activity, Configure and support security tools such as firewalls, anti-virus software, patch management systems, etc. • Implement network security policies, application security, access control and corporate data safeguards • Analyze and establish security requirements for your networks • Manage Training calendars for team/ UPCL employees in security awareness and procedures. • Develop and update business continuity and disaster recovery protocols • Conduct security audits and make policy recommendations • Provide technical security advice, Perform vulnerability and penetration tests across all network segments • Monitor network traffic for suspicious behaviour, Configure security systems such as firewalls, antivirus, and IDS/IPS software • Create network policies and authorization roles for file access • Analyse current security requirements and make suggestions for improvements.



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S No	Type Of Resource	Educational Qualification	Relevant Experience	Job Responsibilities
3	Monitoring Tools (Network , server, LDAP etc.)	Bachelor/Master degree in CS/IT i.e (MCA/BTech /BCA/ MSc-IT/BSc-IT)	<ul style="list-style-type: none"> • Minimum 3+ years of working experience in Monitoring Tools (Network , server, LDAP, Webseal, LDAP, Life-Ray Portal etc.) • Experience of TDI (Tivoli Directory integrator), Linux/Unix/AIX, Bash scripting, and AD (active directory), Tivoli Access Manager and Tivoli Identity Manager. • Understanding the Netcool Application • Experience with installation / configuration of Tivoli Tools. • Expertise Level of knowledge in Netcool Suite of Products like Omnibus and Web GUI. 	<ul style="list-style-type: none"> •Administration and operations for monitoring tools • Creating and managing LDAP, database, local-store, Join View, and custom adapters. • Performance tuning and problem determination. • Creating and managing Life-Ray Portal. • Responsible for Installation and configuration of Monitoring Tools (Network , server, LDAP etc.)
4	Backup software , Storage, SAN Switch, Tape Library)	Bachelor/Master degree in CS/IT i.e. (MCA/BTech /BCA/ MSc-IT/BSc-IT)	<ul style="list-style-type: none"> • Minimum 4+ years of experience in backup software Administrations. • Must have worked on TSM in AIX/Linux/Windows environment. • Working experience of TSM tape library. • Knowledge of installation and configuration of backup agents / APM on servers, configuration of ATL, sharing drive, SAN clients etc. 	<ul style="list-style-type: none"> • Responsible for installation and configuration of backup software/ TSM v 5. x, 6.x,7.x, 8.x Master Server, Media Server, and Clients across various Operating System platforms. • Install and configure backup software /TSM v 6.x,v7.x and 8.x on and migration TSM Master, Media and Clients on UNIX, Windows and Linux environments. • Work on Client-Server architecture for one-to-one and one to many connections. • Responsible for design, complete Backup, Restore strategy, configuration of Backups- Full/Incremental/Image/Sub-file and troubleshooting. •Responsible for configuration and manage Type library activity.



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S No	Type Of Resource	Educational Qualification	Relevant Experience	Job Responsibilities
5	Network Administrator (Routers, Switches, VPN)	Bachelor/Master degree in CS/IT i.e. (MCA/BTech /BCA/ MSc-IT/BSc-IT) CCNA or CCNP certification shall be preferred.	<ul style="list-style-type: none"> • Minimum 4+ years' experience in a network administration role • Experience with Microsoft Windows Server and Linux Server • Experience with Juniper / Cisco switches and routers preferred Skills-Routing & Switching, Network Security, Firewall, Network Administration, WLAN. • Fundamental knowledge of networking concepts • Proven network engineering, network operations and network performance analysis skills • Hands-on technical troubleshooting capabilities • Ability to work independently under minimal supervision • Knowledge of computing infrastructures • Familiarity with server management and monitoring tools • Exceptional critical thinking and problem solving ability 	<ul style="list-style-type: none"> • Assist in network design and implementation. • Provide network support with a variety of operating systems. • Install and configure computer network equipment. • Provide network support to users. • Maintain servers and associated hardware, applications, services, and settings. • Develop and monitor policies for the use of network resources. • Implement and manage disaster recovery and back-up. • Evaluate and recommend security improvements and system upgrades. • Monitor network to ensure optimal performance. • Create and maintain network users/permissions. • Test release of products to minimize user impact and ensure compatibility • Create technical support documentation for systems and applications.
6	Database Administrator	Bachelor/Master degree in CS/IT i.e. (MCA/ BTech/ BCA/ MSc-IT/BSc-IT) Relevant DB2 & Oracle Certification shall be preferred	<ul style="list-style-type: none"> • Minimum 4+ years of experience in Database Management (Oracle/DB2/Microsoft SQL/Postgres/MYSQL) Should have hand's on experience in handling the Databases (Oracle/DB2/MySQL /Postgres/MS-SQL) • Experience in Performance tuning, Database Maintenance, Performance Monitoring, Backup and Recovery • Experience in SQL writing and query tuning, PLSQL, DB2 upgrade and migration, DB2 Installation in different platforms. • Should have knowledge of Creating Stored Procedures. 	<ul style="list-style-type: none"> • Ensured that all production databases are running efficiently 24/7. • Implemented appropriate backup and Restore strategies. • Monitored database performance, tracked and stored procedures and queries' execution times and implemented improvements on Efficiency. • Responded to and resolved all database access and performance Issues, will work on database tickets. • Configured SQL Server for optimum Performance.

S No	Type Of Resource	Educational Qualification	Relevant Experience	Job Responsibilities
7	Load Balancer Engineer (Radware/ Reverse Proxy)	Bachelor/Master degree in Computer Science/IT or equivalent.	<ul style="list-style-type: none"> • Minimum 3+ years of experience on Application Load Balancer / Link Load Balancer/ WAF/Network & Security • Should have strong knowledge of load balancing concept & experience on OSI layers • Basic Knowledge of network/infrastructure/security technologies(firewall/IPS/IDS/routers/switches) • Knowledge of Data Centre and its components like network/server/application environment. • Must have good abilities in performing impact analysis & troubleshooting of packet flow. 	<ul style="list-style-type: none"> • Create Service Specifications, describing the input and output interfaces for the service, as well as its security, editing and interface protocol requirements. • Configuration and maintain Load Balancers and have good knowledge of WAN/LAN network management and monitoring. • Capacity planning • Configuration and troubleshooting of network, server , application and load balancer issues.
8	Call Centre Operation Engineer (call centre applications, CUCM, SYNWAY Media Gateway)	MCA/BCA/Graduation / Diploma, Experience in call Manager shall be preferred.	Minimum 2+ years of experience in Dialer/CUCM/EPBAX environment and Voice related tools and software.	<ul style="list-style-type: none"> • Responsible for managing the EPABX /IPPBX, SIP and voice networks. • Troubleshooting of voice network. • Responsible for dialer, call manager, software configuration and troubleshooting. • Coordination with Partners/Vendors for new requirements and Operational issues.
9	24x7 Network Operating Centre at Data Centre, Dehradun – Helpdesk including reliever	Candidate shall be of BTech/MCA/BCA/Diploma/ Graduation or Equivalent	Candidates having experience in providing support on WAN, LAN, PC / Desktop / Laptop, Printer etc will be preferable	<ul style="list-style-type: none"> • Provide Support to end users for Desktop/Network, application related issues and do proper coordination with within NOC team for major issues, coordination with ISP team for WAN links. • First level troubleshooting for WAN links and LAN. • First level troubleshooting for Networking equipment and IT equipment (PC / Desktop / Laptop, Printer etc.)
10	Application Support Team at Network Operating Centre at Data Centre, Dehradun	Candidate shall be of BTech/MCA/BCA/MSc-IT/BSc-IT/Diploma or Equivalent OR Graduate and having 1-year experience in commercial module	Should have hands on experience of working on RMS, GIS, MDM for at-least one year will be preferable.	Provide Support to end users for Application related issues and do coordination with internal team for resolution of any application related tickets.



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S No	Type Of Resource	Educational Qualification	Relevant Experience	Job Responsibilities
11	24x7 Network Operating Center at Disaster Recovery Center, Haldwani including reliever	Candidate shall be of BTech/MCA/BCA/Diploma/ Graduation or Equivalent	Candidates having experience in providing support on WAN, LAN, PC / Desktop / Laptop, Printer etc will be preferable	<ul style="list-style-type: none"> • Provide Support to end users for Desktop/Network, application related issues and do proper coordination with within NOC team for major issues, coordination with ISP team for WAN links. • First level troubleshooting for WAN links and LAN. • First level troubleshooting for Networking equipment and IT equipment (PC / Desktop / Laptop, Printer etc.)
12	Resource at Data Center for coordination with ISP's	Candidate shall be of BTech/Diploma/BCA/ MCA/Graduation Basic Networking and Hardware certification will be added advantage.	Candidates having experience in providing support on WAN, LAN, PC / Desktop / Laptop, Printer etc will be preferable	<ul style="list-style-type: none"> • Provide Support to end users for WAN and LAN issues. • Coordination with ISP team for WAN links. • First level troubleshooting for WAN links and LAN.
13	IT Support Staff at Circle Office	Candidate shall be of BTech/ Diploma/BCA/ MCA or equivalent or Bachelor degree with Hardware and Networking course from reputed institute. Basic Networking and Hardware certification will be added advantage	Candidates having experience in providing support on WAN, LAN, PC / Desktop / Laptop, Printer etc will be preferable	<ul style="list-style-type: none"> • Provide On-site Support to end users for Application related issues and do proper coordination with NOC team. • First level troubleshooting for WAN links • First level troubleshooting for Networking equipment and IT equipment (PC / Desktop / Laptop, Printer etc.)
14	MDAS Engineer	NA	NA	NA
15	GIS Executive	Candidate shall be of BTech/MCA/BCA/ MSc-IT/BSc-IT/Diploma or equivalent or Graduate and having 2 years of experience in GIS	Candidate having experience in in Georeferencing/ Shape file creation/ ArcGIS/ ArcMap/ Arc Catalog/ Google Earth.	<ul style="list-style-type: none"> • Digitisation, Editing and Spatial Data Analysis. • Perform various Image Processing Techniques like Image Classification, Image Correction, and GIS analysis • Satellite Imageries to derive meaningful information and results as per the project requirements. • Create and maintain the GIS database with respect to project standards. • Create map layouts, Reports and document procedures as per project requirements.
B	Experience of Application Development Team			
S No	Type Of Resource	Educational Qualification	Relevant Experience	Job Responsibilities



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S No	Type Of Resource	Educational Qualification	Relevant Experience	Job Responsibilities
1	Developer for CSC/MIS	BTech/MCA/BCA/ MSc-IT/BSc-IT or equivalent.	Software Developer having minimum 4+ years' experience in software development and preferably 01-year experience software development in CSC/MIS	Development & Integration works pertaining to CSC and MIS module
2	Application developer for WSS and UPCL website	BTech/MCA/BCA/ MSc-IT/BSc-IT or equivalent.	Software Developer having minimum 3+ years' experience in software/website development and preferably 01 year experience software development in WSS	Development & Integration works pertaining to Web Self Portal and UPCL website
3	Developer for New Service Connection	BTech/MCA/BCA/ MSc-IT/BSc-IT or equivalent.	Software Developer having minimum 4+ years' experience in software development and minimum 01 year experience software development in New Service Connection module	Development & Integration works pertaining to New Service Connection module
4	Developer for Metering/Dn D/Collection	BTech/MCA/BCA/ MSc-IT/BSc-IT or equivalent.	Software Developer having minimum 4+ years' experience in software development and minimum 01 year experience software development in Metering/DnD/Collection module	Development & Integration works pertaining to Metering, Disconnection and Collection module
5	Developer for Billing	BTech/MCA/BCA/ MSc-IT/BSc-IT or equivalent.	Software Developer having minimum 4+ years' experience in software development and minimum 01 year experience software development in Billing module for 1 resource and for other resource minimum 2+ years of experience in software development.	Development & Integration works pertaining to Billing module
6	Developer for Energy Audit	BTech/MCA/BCA/ MSc-IT/BSc-IT or equivalent.	Software Developer having minimum 4+ years' experience in software development and preferably 01-year experience software development in Energy Audit module	Development & Integration works pertaining to Energy Audit module
7	GIS Developer for ARC-FM & ARC-GIS	BTech/MCA/BCA/ MSc-IT/BSc-IT or equivalent.	Software Developer having minimum 3+ years' experience in software development and minimum 01-year experience software development in ARC_GIS & ARC_FM will be preferable.	Development & Integration works pertaining to ARC-GIS and ARC- FM module
8	MDAS/MDM Developer for Infinite IRDM	BTech/MCA/BCA/ MSc-IT/BSc-IT or equivalent.	Software Developer having minimum 2+ years' experience in software development and minimum 01-year experience	Development & Integration works pertaining to MDM module

S No	Type Of Resource	Educational Qualification	Relevant Experience	Job Responsibilities
			software development in MDM module IRDM	
9	CA APP DB (Functional & Admin)	BTech/MCA/BCA/ MSc-IT/BSc-IT or equivalent.	Software Developer having minimum 2 year experience in development of Mobile APPS and related Web Services for integration with other modules.	Development & Integration works pertaining to Mobile Application
10	Business Analyst	Candidate shall be of BTech/MCA/BCA/ Diploma/ Graduation or equivalent or having 1 year experience in m-Power module.	Candidates having minimum 4 years of experience in business analysis or a related field of commercial application modules(MBC), GIS, MDM will be preferable.	<ul style="list-style-type: none"> Analysing and evaluating the current business processes and identifying areas of improvement. Researching and reviewing up-to-date business processes. Presenting ideas and findings in meetings. Training and coaching staff members. Creating initiatives depending on the business's requirements and needs Collaborating with UPCL and other third-party stakeholders Excellent documentation skills.
11	Angular Developer	BTech/MCA/BCA/ MSc-IT/BSc-IT or equivalent.	<ul style="list-style-type: none"> Software Developer having minimum 4+ years' experience in software development as frontend UI/Web developer. Strong technical skills in complex website development, in-depth knowledge of web technologies, standards to deliver the best experience across web and mobile devices including responsive web UI 	<ul style="list-style-type: none"> Develop User interfaces for Modern Rich Internet Applications with the latest Front End Technologies. Writing Code and perform unit testing Make design and technical decisions for AngularJS projects. Ensuring high performance Internal and External Web-service Integration Generate Reports Writing SQL Queries (DB2, Oracle, MySQL) Perform third-party integrations like Payment Gateways, SAP etc.
12	Application Tester	BTech/MCA/BCA/ MSc-IT/BSc-IT or equivalent.	<ul style="list-style-type: none"> 4 years of experience for Senior Test Engineer and 1 years of experience for Junior Test Engineer. Up-to-date knowledge of software test design and testing methodologies. Working knowledge of test techniques and compatibility with various software programs. Working knowledge of programming. 	<ul style="list-style-type: none"> Report bugs and errors to development teams. Evaluate product code according to specifications. Execute test cases (manual or automated) and analyze results Conduct post-release/ post-implementation testing Work with cross-functional teams to ensure quality throughout the software development lifecycle
13	Application Manager	BTech/MCA/BCA/ MSc-IT/BSc-IT or equivalent.	Project Manager Cum Sr. Software having minimum 8-year experience in software development with minimum 4 years experience of handling project management of Commercial applications.	Project Manager for managing entire Technical Support Activities



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S No	Type Of Resource	Educational Qualification	Relevant Experience	Job Responsibilities
14	PROJECT MANAGER	BTech/MBA-IT/MCA/BCA / MSc-IT/BSc-IT or equivalent.	Project Manager having minimum 10-year experience in IT with minimum 6years experience of handling project management of commercial applications.	<ul style="list-style-type: none"> • Coordinate internal resources and third parties/vendors for the flawless execution of projects • Ensure that all projects are delivered on-time, within scope and within budget • Developing project scopes and objectives, involving all relevant stakeholders and ensuring technical feasibility • Ensure resource availability and allocation • Develop a detailed project plan to track progress • Use appropriate verification techniques to manage changes in project scope, schedule and costs • Measure project performance using appropriate systems, tools and techniques • Report and escalate to management as needed • Manage the relationship with the client and all stakeholders • Perform risk management to minimize project risks • Establish and maintain relationships with third parties/vendors • Create and maintain comprehensive project documentation



7. FMS DURATION/ SERVICE LEVEL/ CRITICALITY

Working hours and Criticality of Resources:

Working hours and criticality of the resources are defined as per the table below:

7 (i) Severity Level for Data Center / DR Center Operational activities

S No.	SERVICE	DURATION	CRITICALITY
1	SERVICE DESK	24 HOURS	URGENT-12X6 REST-HIGH
2	ASSET MANAGEMENT SERVICES	8X6	MEDIUM
3	DATACENTER ADMINISTRATION	24 X7	CRITICAL
4	DATABASE ADMINISTRATION SERVICES	8X6	URGENT
5	ANTIVIRUS & SECURITY ADMINISTRATION	8X6	URGENT
6	NETWORK MANAGEMENT-WAN	24X7	CRITICAL
7	NETWORK MANAGEMENT-LAN	12X7	CRITICAL
8	MESSAGING/EMAIL MANAGEMENT	12X6	MEDIUM
9	BACKUP MANAGEMENT	AS PER SCHEDULE	HIGH
10	MANAGEMENT OF UTILITY'S EMS & NMS	24X7	CRITICAL

7(ii) Severity Level for Application Level Helpdesk Support

Head	Type of Issue	Single User Affected	Multiple User Affected
Application	Internal error on page of any application	HIGH	CRITICAL
	Step skip under Any Application	URGENT	CRITICAL
	Bill not generated	HIGH	URGENT
	Bulk bill not processing	URGENT	CRITICAL
	Report not opening under all applications at any level of hierarchy	HIGH	CRITICAL
	MIS data not updating	HIGH	URGENT
	SBM not uploading/downloading	URGENT	CRITICAL
	Book number not populating in inspection	URGENT	CRITICAL
	Submit button not working in any application	URGENT	CRITICAL
	Issue in inspection screen like book number not coming & other such problem	URGENT	CRITICAL
	Complaint rectified in csc but still not updated in CA	HIGH	URGENT
	Any module not working	URGENT	CRITICAL
	Application not submitted successfully	URGENT	CRITICAL



Head	Type of Issue	Single User Affected	Multiple User Affected
	Difference in charges applicable	CRITICAL	CRITICAL
	Application slow as per field office	HIGH	URGENT
	Updated in GIS but not reflected in relevant CA applications	HIGH	URGENT
	Any other error while processing any request	HIGH	CRITICAL
	Issue in collection	URGENT	CRITICAL
Portal	Portal not working	CRITICAL	CRITICAL
	Login inside login	URGENT	CRITICAL
	Problem related with ESB i.e. service not working	CRITICAL	CRITICAL
Login Related	New login creation	HIGH	
	Login update	HIGH	
	Login disable	HIGH	
	Password reset	HIGH	
	Forward to wrong login	URGENT	CRITICAL
	Cashier counter code generation	HIGH	
	Cashier code not configured	HIGH	
	Not able to login in PC	HIGH	CRITICAL
	Password change not working but user can use the old password for work	LOW	URGENT
update	initial reading update	MEDIUM	
	receipt cancellation	HIGH	
	step back	medium	
	dismantle to live	MEDIUM	
	book/consumer mapping to office	MEDIUM	
	meter change deletion	MEDIUM	
	pole number updation	LOW	
	any other updation		
Specific to GIS Application	GIS data given but not validated & updated	URGENT	CRITICAL
	GIS data validated/updated but not recon with CA applications	URGENT	CRITICAL
	GIS License not found used as per instructions of UPCL under SLA	URGENT	CRITICAL
	GIS data validations queries not working	URGENT	CRITICAL
Specific to Energy Audit Application	calling the energy data taking time	HIGH	URGENT
	Consumption report not generating	URGENT	CRITICAL
	Energy /billing mismatch while processing the report	CRITICAL	CRITICAL
	The structural changes in GIS database is not properly integrated	CRITICAL	CRITICAL
	Feeder and DTR estimation is not proper	CRITICAL	CRITICAL



Head	Type of Issue	Single User Affected	Multiple User Affected
	wrong reports (data or format)	CRITICAL	CRITICAL
	data getting mixed while processing simultaneously by multiple users	CRITICAL	CRITICAL
	Issue with input energy and billed energy for any consumer	CRITICAL	CRITICAL
	MF upation/meter upation not integrated with MDM	CRITICAL	CRITICAL
DC-DR	Data replication in any database	CRITICAL	
	Any application in DR not in sync with DC	CRITICAL	
Mobile Application	Complete Functionality in Mobile Application not working	HIGH	CRITICAL
	Some Functionality/Interface or any integrated service in Mobile Application not working	MEDIUM	URGENT

Severity Definition Chart

Support Category	Criteria	Resolution	Maximum Response Time
Critical	The system is unable to be used for normal business activities. There is certainty of financial loss to PURCHASER.	90 Minutes	15 Minutes
Urgent	There is a problem with part of the system, which impacts on Purchaser's decision making. No viable workaround is available. There is a likelihood of financial loss.	4 Hours	1 Hour
High	The efficiency of users is being impacted, but has a viable workaround.	6 hours	2 Hours
Medium	A low impact problem that affects the efficiency of users but has a simple workaround.	12 Hours	8 Hours
Low	A fault, which has no particular impact on processing of normal business activities.	One Week	8 Hours

Note: - For application specific issues a part from the above, 48 hours additional time will be provided for testing/validation/deployment/restarting of DB or server after necessary approval from UPCL. UPCL can also review these timelines for specific application issue depending upon the nature of issue.



8. Timelines, Delivery Schedule & Deliverable

- i. The contract period shall be 01 year for this contract from the award date.
- ii. Initially the successful bidder has to take over the system from existing FMS & AMS vendor and during this period, the FMS and AMS VENDOR has to deploy the resources who will work with existing FMS & AMS vendor to get the knowledge transfer and take over the system. UPCL R-APDRP Part-A and IT wing will suitably help in handshaking process.
- iii. Works pertaining to supply, installation and commissioning of all hardware and software (capex + opex) shall be completed within 12 weeks from the date of LoA including data migration.
- iv. Contract can be extended further for a period of 01(One) year on mutual terms and conditions.

9. Appointment of Agency for FMS & AMS

a. Award Criteria

UPCL will award the contract to the successful bidder for a period of 01 (One) year based on the evaluation criterion (L1 basis) for eligible and technically found responsive bidders.

b. Right to Accept/Reject Any Proposal or All Proposal(s)

UPCL reserves the right to accept or reject any proposal, and to annul the bidding process / public procurement process and reject all proposals at any time prior to award of contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for UPCL action.

c. Notification of Awards

1. Prior to the expiration of the validity period, UPCL will notify the successful bidder in writing by email, that its proposal has been accepted. In case the bidding process / public procurement process has not been completed within the stipulated period, **UPCL may like to request the bidders to extend the validity period of the bid.**
2. The notification of award will constitute the formation of the contract. Upon the successful bidder's furnishing of Performance Bank Guarantee, UPCL will notify to bidder and return their EMD.

d. Contract Finalization & Award

1. UPCL shall reserve the right to negotiate with the bidder(s) whose proposal has been most responsive. On this basis, the draft contract agreement would be finalized for award & signing.



2. UPCL may also like to reduce or increase the quantity of any item in the scope of work defined in the RFP. **Accordingly, total contract value may change on the basis of the rates defined in the financial proposal.**

10. Performance Bank Guarantee

UPCL will require the selected bidder to provide a performance bank guarantee, at the time of contract signing, **for a value equivalent to 10% of the total cost of award value. The performance guarantee should be valid for one (1) years with three (3) months claim period w.e.f. contract agreement signing date.** The performance guarantee shall contain a claim period of three months from the last date of validity. The selected bidder shall be responsible for extending the validity date and claim period of the performance guarantee as and when it is due on account of non-completion of the project. In case the selected bidder fails to submit performance guarantee within the stipulated time, UPCL at its discretion may cancel the order placed on the selected bidder without giving any notice. UPCL shall invoke the performance guarantee in case the selected bidder fails to discharge their contractual obligations during the period or UPCL incurs any loss due to FMS & AMS vendor's negligence in carrying out the project implementation as per the agreed terms & conditions.

11. Signing of Contract

After UPCL notifies the successful bidder that its proposal has been accepted, UPCL shall enter into a contract, incorporating all clauses, pre-bid clarifications and the proposal of the bidder between UPCL and the successful bidder. The draft contract agreement shall be prepared after finalization of most responsive bid.

12. Failure to agree with terms and conditions of RFP

- i. Failure of the successful bidder to agree with the draft contract agreement and terms & conditions of the RFP shall constitute sufficient grounds for the annulment of the award, in which event UPCL may award the contract to the next best value bidder or call for new proposals from the interested bidders.
- ii. In such a case, UPCL shall invoke the EMD of the successful bidder.



13. General Conditions of Contract

13.1 Definitions

The following words and expressions shall have the meanings hereby assigned to them:

- 13.1.1 “Contract”** means the agreement entered into between the purchaser and the supplier, together with the contract documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein.
- 13.1.2 “Contract Documents”** shall mean the following documents listed, including any amendments thereto to be read and construed as part of this agreement, viz.:
- a) The purchaser’s detailed letter of award
 - b) The purchaser’s letter of intent
 - c) The special conditions of contract;
 - d) The general conditions of contract;
 - e) The scope of work;
 - f) Instructions to bidders
 - g) Bidder’s response (proposal) to the RFP, including the bid submission sheet and the price schedules submitted by the FMS &AMS vendor;
 - h) Contract forms (performance security)
- 13.1.3 “Contract Price”** means the price payable to the supplier as specified in the agreement, subject to such additions and adjustments thereto or deductions there from, as may be made pursuant to the contract.
- 13.1.4 “Day”** means calendar day.
- 13.1.5 “Delivery”** means the transfer of the goods and services from the supplier to the Purchaser in accordance with the terms and conditions set forth in the contract.
- 13.1.6 “Completion”** shall mean the completion of the related services by the supplier in accordance with the terms and conditions set forth in the contract.
- 13.1.7 “GCC”** means the general conditions of contract.
- 13.1.8 “Goods”** means all hardware, software, networking equipment and/or other equipment accessories and materials that the supplier is required to supply to the purchaser under the contract.
- 13.1.9 “Intellectual Property Rights”** means any patent, copyright, trademark, trade name, service marks, brands, propriety information, whether arising before or after the execution of this contract and the right to ownership and registration of these rights.
- 13.1.10 “Purchaser’s Country”** shall mean India.
- 13.1.11 “Purchaser”** means the entities purchasing the goods and related services.
- 13.1.12 “Related Services”** means the services to be provided as per the requirements / conditions specified in the contract. In addition to this, the

definition would also include other related/ancillary services that may be required to execute this contract.

13.1.13 “SCC” means the Special Conditions of Contract.

13.1.14 “Service Level Agreement” (SLA) shall mean the Service Level Agreement entered into between the purchaser and the supplier.

13.1.15 “Subcontractor” means any natural person, private or government entity, or a combination of the above, including its legal successors or permitted assigns, to whom any part of the goods and services to be supplied or execution of any part of the related services is subcontracted by the supplier, as per the provisions of clause 13.20 of the GCC.

13.1.16 “Supplier” means the FMS &AMS vendor whose bid to perform the contract has been accepted by the purchaser and is named as such in the agreement, and includes the legal successors or permitted assigns of the supplier.

13.1.17 “The MoP” is the Ministry of Power, Government of India.

13.1.18 “The Site” shall mean all identified locations within the State of Uttarakhand, where the supplier carries out any installation of goods and services or is required to provide any related services.

13.1.19 “OEM” means the Original Equipment Manufacturer of any equipment / system / software / product that are providing such goods and services to the purchaser under the scope of this bid / contract.

13.1.20 “Kick Off Meeting,” means a meeting convened by the purchaser to discuss and finalize the work execution plan and procedures with the supplier.

13.1.21 The term “in writing” means communicated in written form with proof of receipt

13.2 Contract Documents

13.2.1 Subject to the order of precedence set forth in the agreement, all documents forming the contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory.

13.3 Corrupt Practices

13.3.1 The purchaser requires bidders, suppliers, and contractors to observe the highest standard of ethics during the execution of such contracts.

13.3.2 The following definitions apply:

- a) “Corrupt Practice” means the offering, giving receiving, or soliciting, directly or indirectly, of anything of value to influence the action of any party in the procurement process or the execution of a contract;
- b) “Fraudulent Practice” means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract;
- c) “Collusive Practices” means a scheme or arrangement between two or more bidders, with or without the knowledge of the utility, designed to influence the action of any party in a procurement process or the execution of a contract;

d) “Coercive Practices” means harming or threatening to harm, directly or indirectly, persons, or their property to influence their participation in a procurement process, or affect the execution of a contract.

13.3.3 The purchaser will reject a proposal for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the contract.

13.3.4 After the award of the contract if it is coming to the knowledge of the utility that the supplier has engaged in corrupt, fraudulent, collusive, or coercive practices at any stage, the purchaser shall forthwith terminate the contract as per the provisions of GCC Clause 13.34.

13.4 Interpretation

13.4.1 In this contract unless a contrary intention is evident:

- a) The clause headings are for convenient reference only and do not form part of this contract;
- b) Unless otherwise specified a reference to a clause number is a reference to all of its sub-clauses;
- c) Unless otherwise specified a reference to a clause, sub-clause or section is a reference to a clause, sub-clause or section of this contract including any amendments or modifications to the same from time to time;
- d) A word in the singular includes the plural and a word in the plural includes the singular;
- e) A word importing a gender includes any other gender;
- f) A reference to a person includes a partnership and a body corporate;
- g) A reference to legislation includes legislation repealing, replacing or amending that legislation;
- h) Where a word or phrase is given a particular meaning it includes the appropriate grammatical forms of that word or phrase which have corresponding meanings
- i) In the event of an inconsistency between the terms of this contract and the bid document and the proposal, the terms of this contract hereof shall prevail.
- j) Whenever a material or article is specified or described by the name of a particular brand, manufacturer or trade mark, the specific item shall be understood as establishing type, function and quality desired. Products of other manufacturers may also be considered, provided sufficient information is furnished so as to enable the purchaser to determine that the products are equivalent to those named

13.4.2 Incoterms: The meaning of any trade term and the rights and obligations of parties there under shall be as prescribed by Incoterms.



- a) EXW, CIF, CIP, and other similar terms, shall be governed by the rules prescribed in the current edition of Incoterms, published by the International Chamber of Commerce at the date of the Invitation for bids

13.4.3 Entire Agreement: The contract constitutes the entire agreement between the purchaser and the supplier and supersedes all communications, negotiations and agreements (whether written or oral) of parties with respect thereto made prior to the date of Contract.

13.4.4 Amendment: No amendment or other variation of the contract shall be valid unless it is in writing, is dated, expressly refers to the contract, and is signed by a duly authorized representative of each party thereto.

13.4.5 Waiver:

- a) Subject to GCC sub-clause b) below, no relaxation, forbearance, delay, or indulgence by either party in enforcing any of the terms and conditions of the contract or the granting of time by either party to the other shall prejudice, affect, or restrict the rights of that party under the contract. Neither shall any waiver by either party of any breach of contract operate as waiver of any subsequent or continuing breach of contract.
- b) The waiver by either party of a breach or default of any of the provisions of this contract by the other party shall not be interpreted as:
- A waiver of any succeeding breach of the same or other provision, nor shall any delay or omission on the part of the other party to exercise; or
 - A way to avail itself of any right, power, or privilege that it has or may have under this contract to operate as waiver of any breach or default by the other party.

Any waiver of a party's rights, powers, or remedies under the contract must be in writing, dated, signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.

13.4.6 Severability: If any provision or condition of the contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the contract or the contract as a whole and the remaining provisions of the contract shall remain in full force and effect.

13.5 Language

13.5.1 The official language of the contract is English. Contract as well as all correspondence and documents relating to the contract exchanged by the supplier and the purchaser, shall be written in English. Supporting documents and printed literature that are part of the contract may be in another language provided they are accompanied by an accurate translation of the relevant passages in English, in which case, for purposes of interpretation of the contract, the English translation shall govern.



- 13.5.2** The Supplier shall bear all costs of translation to English and all risks of the accuracy of such translation. The supplier shall be bound to the English translation and what has been stated therein.

13.6 Consortium

Consortium not allowed in the tender.

13.7 Notices

- 13.7.1** All notices and other communications under this contract must be in writing, and must either be mailed by registered mail with acknowledgement or hand delivered with proof of it having been received.
- 13.7.2** If mailed, all notices will be considered as delivered after 5 days, of the notice having been mailed. If hand delivered, all notices will be considered, when received by the party to whom the notice is meant and sent for.
- 13.7.3** All notices under this contract shall be sent to or delivered at the address as specified by the parties.
- 13.7.4** A notice shall be effective when delivered or on the notice's effective date, whichever is later.

13.8 Governing Law

- 13.8.1** The contract shall be governed by and interpreted in accordance with the laws of the India. The High Court of Judicature and courts subordinate to such High Courts shall have exclusive jurisdiction in respect of any disputes relating to the bidding process, award of contract and execution of the contract.
- 13.8.2** In all cases, this contract shall be governed by and interpreted in accordance with the Law of the Union of India. In this context, the expression 'Law' takes within its fold Statutory law, Judicial Decisional Law and Delegated Legislation as well.

13.9 Settlement of Disputes

- 13.9.1** The purchaser and the supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the contract.
- 13.9.2** If the parties fail to resolve such a dispute or difference by mutual consultation within twenty-eight (28) days from the commencement of such dispute and difference, either party may require that the dispute be referred for resolution to the formal mechanisms, described below (The date of commencement of the dispute shall be taken from the date when this clause reference is quoted by either party in a formal communication clearly mentioning existence of dispute or as mutually agreed).
- 13.9.3** The mechanism for resolution of disputes for bidders shall be in accordance with the Indian Arbitration and Conciliation Act of 1996. The Arbitral Tribunal shall consist of 3 (Three) Arbitrators. Each Party shall nominate an Arbitrator and the two



nominated Arbitrators shall mutually agree and nominate a third Presiding Arbitrator.

13.9.4 The Arbitrators shall necessarily be retired High Court Judges and the umpire shall be a retired Chief Justice.

13.9.5 The place for arbitration shall be Dehradun.

13.10 Scope of Work

13.10.1 The goods and related services to be supplied are specified in **Chapter –5** scope of work. At the time of awarding the contract, the purchaser shall specify any change in the scope of work. Such changes may be due for instance, if the quantities of goods and related services are increased or decreased at the time of award.

13.10.2 Unless otherwise stipulated in the contract, the scope of work shall include all such items not specifically mentioned in the contract but that can be reasonably inferred from the Contract as being required for attaining Delivery and Completion of the goods and related services as if such items were expressly mentioned in the contract.

13.11 Delivery

13.11.1 Subject to GCC Sub-Clause 13.33, the Delivery of the goods and completion of the related services shall be in accordance with the implementation schedule specified in **scope of work**.

13.12 Supplier's Responsibilities

13.12.1 The Supplier shall supply all the goods and related services included in the scope of work in accordance with GCC Clause 13.10, and the implementation schedule, as per GCC clause 13.11.

13.13 Purchase's Responsibilities

13.13.1 Whenever the supply of goods and related services requires that the supplier obtain permits, approvals, and import and other licenses from local public authorities, the purchaser shall, if so required by the supplier, make its best effort to assist the supplier in complying with such requirements in a timely and expeditious manner.

13.13.2 The purchaser shall bear all costs involved in the performance of its responsibilities, in accordance with GCC sub-clause 13.14.1.

13.13.3 The Chief Information Officer (CIO) of utility or any other person designated by the utility shall act as the nodal point for implementation of the contract and for issuing necessary instructions, approvals, commissioning, acceptance certificates, payments etc. to the supplier.

13.13.4 The CIO of utility or any other person designated by the utility shall approve all such documents within 15 working days.



13.13.5 Purchaser may provide on supplier's request, particulars/ information / or documentation that may be required by the supplier for proper planning and execution of scope of work under this contract.

13.13.6 Purchaser shall provide to the supplier sitting space and infrastructure and utilities, in the purchaser's offices at such location as may be mutually decided by the parties.

13.14 Contract Price

13.14.1 The Contract Price shall be as specified in the agreement subject to any additions and adjustments thereto, or deductions there from, as may be made pursuant to the contract as also subject to provisions of sub-clause 13.14.2.

13.14.2 Prices charged by the supplier for the goods delivered and the related services performed under the contract shall not vary from the prices quoted by the supplier in its bid, with the exception of any price adjustments.

13.15 Terms of Payment

13.15.1 The contract price shall be paid in the manner specified in schedule – I, payment schedule of this document. No invoice for extra work/change order on account of change order will be submitted by the supplier unless the said extra work /change order has been authorized/approved by the purchaser in writing.

13.15.2 The supplier's request for payment shall be made to the purchaser in writing, accompanied by invoices describing, as appropriate, the goods delivered and related services performed, accompanied by the documents submitted pursuant to GCC Clause 13.11.

13.15.3 All the invoices shall be submitted along with milestone completion sign-off document.

13.15.4 Payments shall be made promptly by the purchaser, no later than forty-five (45) days after submission of an invoice or request for payment by the supplier, and the purchaser has accepted it.

13.15.5 If any excess payment has been made by the purchaser due to difference in quoted price in proposal and supplier's invoice, the purchaser may without prejudice to its rights recover such amounts by other means after notifying the supplier or deduct such excess payment from any payment subsequently falling due to the supplier.

13.15.6 The currency in which payment shall be made to the supplier under this contract is Indian Rupees (INR).

13.16 Taxes & Duties

13.16.1 The prices quoted by the supplier shall be inclusive of all duties/taxes/levies. Responsibility for including all applicable taxes/duties/levies in the proposal lie with the bidder and the utility shall not be responsible for any error/omission on the part of the bidder.

13.16.2 All statutory taxes, levies, duties etc. shall be paid on actual.



- 13.16.3** For goods supplied from outside the purchaser's country, the supplier shall be entirely responsible for all taxes, duties, stamp duties license fees, and other such levies imposed outside the purchaser's country.

13.17 Performance Security

- 13.17.1** The supplier shall, within fourteen (14) days of the issue of LoA, provide a performance security for the due performance of the contract in the amounts and currencies as specified in RFP.
- 13.17.2** The purchaser shall at its sole discretion invoke the performance security and appropriate the amount secured thereunder, in the event that the supplier commits any delay or default in delivery of the goods or related services or commits any other breach of the terms and conditions of the contract.
- 13.17.3** The performance security shall be denominated in the currencies of the contract, and shall be in line with the template placed at Annexure – 04.

13.18 Intellectual Property

- 13.18.1** Purchaser shall own and have a right in perpetuity to use all newly created intellectual property rights which have been developed solely during execution of this contract, including but not limited to all source code, object code, records, reports, designs, application configurations, data and written material, products, specifications, reports, drawings and other documents which have been newly created and developed by the supplier solely during the performance of related services and for the purposes of inter-alia use or sub-license of such services under this contract. The supplier undertakes to disclose all such intellectual property rights arising in performance of the related services to the purchaser and execute all such agreements/documents and file all relevant applications, effect transfers and obtain all permits and approvals that may be necessary in this regard to effectively transfer and conserve the intellectual property rights of the purchaser. To the extent that intellectual property rights are unable by law to so vest, the supplier assigns those intellectual property rights to purchaser on creation.
- 13.18.2** The supplier shall be obliged to ensure that all approvals, registrations, licenses, permits and rights etc. which are inter-alia necessary for use of the goods supplied / installed by the supplier, the same shall be acquired in the name of the purchaser, and the same may be assigned by the purchaser to the supplier solely for the purpose of execution of any of its obligations under the terms of this contract. However, subsequent to the term of this contract, such approvals, registrations, licenses, permits and rights etc. shall endure to the exclusive benefit of the purchaser.
- 13.18.3** The supplier shall ensure that while it uses any software, hardware, processes, document or material in the course of performing the services, it does not infringe the intellectual property rights of any person and the supplier shall keep the purchaser indemnified against all costs, expenses and liabilities howsoever, arising

out any illegal or unauthorized use (piracy) or in connection with any claim or proceedings relating to any breach or violation of any permission/license terms or infringement of any intellectual property rights by the supplier or its personnel during the course of performance of the related services. In case of any infringement by the supplier, the supplier shall have sole control of the defence and all related settlement negotiations.

13.18.4 Subject to sub-clauses 13.18.1, 13.18.2 & 13.18.3 above, the supplier shall retain exclusive ownership of all methods, concepts, algorithms, trade secrets, software documentation, other intellectual property or other information belonging to the supplier that existed before the effective date of the contract.

13.19 Confidential Information

13.19.1 Both parties undertake to each other to keep confidential all information (written as well as oral) concerning the business and affairs of the other, which has been obtained or received as a result of the discussions leading up to or the entering of the contract.

13.19.2 After entering in the contract, the purchaser and the supplier shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data, or other information furnished directly or indirectly by the other party hereto in connection with the contract, whether such information has been furnished prior to, during or following completion or termination of the contract. Notwithstanding the above, the supplier may furnish to its subcontractor such documents, data, and other information it receives from the purchaser to the extent required for the subcontractor to perform its work under the contract, in which event the supplier shall obtain from such subcontractor an undertaking of confidentiality similar to that imposed on the supplier under this clause.

13.19.3 The purchaser shall not use such documents, data, and other information received from the supplier for any purposes unrelated to the contract. Similarly, the supplier shall not use such documents, data, and other information received from the purchaser for any purpose other than the design, procurement, or other work and services required for the performance of the contract.

13.19.4 The obligation of a party under GCC sub-clauses point no. 13.19.2 & 13.19.3 above, however, shall not apply to information that

- a) The purchaser or supplier need to share with the institutions participating in the financing of the contract.
- b) Now or hereafter enters the public domain through no fault of that party.
- c) Can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly from the other party.
- d) Otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.



- 13.19.5** The above provisions of GCC clause 13.19 shall not in any way modify any undertaking of confidentiality given by either of the parties hereto prior to the date of the contract in respect of the supply or any part thereof.
- 13.19.6** Each of the parties to this contract, undertakes to the other to take all such steps as shall from time to time be necessary to ensure compliance with the provisions of the above clauses by its employees, agents and sub-contractors.
- 13.19.7** The provisions of GCC clause 13.19 shall survive completion or termination, for whatever reason, of the contract.

13.20 Sub-contracting

- 13.20.1** Except as provided hereunder under sub-clause 13.20.2 of the GCC, the supplier shall not be permitted to sub-contract any part of its obligations under the contract.
- 13.20.2** Supplier can sub-contract the TSS of any other software module with prior approval of UPCL however primary responsibility shall rest with the Supplier.
- 13.20.3** The supplier shall ensure that the sub-contractor appointed has sufficient capacity to undertake the execution of the tasks they will perform under this contract.
- 13.20.4** The supplier indemnifies and shall keep indemnified purchaser against any losses, damages, claims or such other implications arising from or out of the acts and omissions of such sub-contractor. The Supplier shall be responsible for making all payments to the sub-contractor as may be necessary, in respect of any services performed or task executed, and the purchaser shall not be responsible for any part or full payment, which is due to such subcontractor.
- 13.20.5** All rights of use of any process, product, service or facility developed or any other task performed by the subcontractor for the supplier, under this contract would lie exclusively with the purchaser in perpetuity free from all liens, encumbrances and other third-party rights and the supplier shall, wherever required, take all steps that may be necessary to ensure the transfer of such ownership in favour of the purchaser.
- 13.20.6** Nothing in this clause 13.20 of the GCC shall relieve the supplier from its any of its liabilities or obligations under this contract. The purchaser reserves the right to hold supplier liable for any act/omission of any subcontractor.
- 13.20.7** Where the purchaser deems necessary, it shall have the right to require replacement of any subcontractor with another subcontractor and the supplier shall in such case terminate forthwith all agreements/contracts other arrangements with such subcontractor and find suitable replacement for such subcontractor to the satisfaction of the purchaser at no additional charge. Failure to terminate all agreements/contracts with such sub-contractors, shall amount to a breach of the terms hereof.
- 13.20.8** The supplier shall be responsible for ensuring that the subcontractor shall comply with all relevant and applicable provisions of the contract. In default on the part of the sub-contractor to comply with the terms and conditions of the contract wherever applicable, shall amount to breach on the part of the supplier, and the purchaser in



addition to all other rights, have the right to claim damages add recover from the supplier all losses/ or other damages that may have resulted from such failure.

13.21 Specifications & Standards

13.21.1 Technical specifications and drawings

- a) The supplier shall ensure that the goods and related services comply with the technical specifications and other provisions of the contract.
- b) The supplier shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof provided or designed by or on behalf of the purchaser, by giving a notice of such disclaimer to the purchaser.
- c) The goods and related services supplied under this contract shall confirm to the standards mentioned in section 5, scope of work and, when no applicable standard is mentioned, the standard shall be equivalent or superior to the official standards whose application is appropriate to the country of origin of the goods.

13.21.2 Wherever references are made in the contract to codes and standards in accordance with which it shall be executed, the edition or the revised version of such codes and standards shall be those specified in the section 5, scope of work. During contract execution, any changes in any such codes and standards shall be applied only after approval by the purchaser and shall be treated in accordance with GCC clause 12.32.

13.22 Packing & Documents

13.22.1 The supplier shall provide such packing of the goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the contract. During transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the final destination of the goods and the absence of heavy handling facilities at all points in transit. The purchaser shall not be responsible in any manner for any loss or damage caused to the goods during transit.

13.22.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the contract and in any other instructions ordered by the purchaser.

13.23 Insurance

13.23.1 The goods supplied under the contract shall be fully insured by the supplier, in INR, against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery, in accordance with the applicable Incoterms.



13.24 Transportation

13.24.1 Obligations for transportation of the goods shall be borne by the supplier and shall be in accordance with the Incoterms specified in RFP.

13.25 Inspections & Tests

13.25.1 The supplier shall at its own expense and at no cost to the purchaser carry out all such tests and/or inspections of to ensure that the goods and related services are complying with the functional parameters, codes and standards specified in the scope of work at Section 5, to the satisfaction of the purchaser.

13.25.2 The inspections and tests may be conducted on the premises of the supplier, at point of delivery, and/or at the final destination of the goods, or in another place in the purchaser's country. Subject to sub-clause 13.25.3, if conducted on the premises of the supplier or its subcontractor, all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the purchaser.

13.25.3 The purchaser or its designated representative shall be entitled to attend the tests and/or inspections referred to sub-clause 13.25.2, provided that the purchaser bear all of its own costs and expenses incurred in connection with such attendance including, but not limited to, all travelling, boarding and lodging expenses.

13.25.4 Whenever the supplier is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the purchaser.

13.25.5 The purchaser may require the supplier to carry out any test and/or inspection to verify that the characteristics and performance of the goods or related services comply with the technical specifications, codes and standards under the contract.

13.25.6 The supplier shall provide the purchaser with a report of the results of any such test and/or inspection.

13.25.7 The purchaser may reject any goods / related services or any part thereof that fail to pass any test and/or inspection or do not conform to the specifications. The supplier shall either rectify or replace such rejected goods/ related services or parts thereof or make alterations necessary to meet the specifications at no cost to the purchaser, and shall repeat the test and/or inspection, at no cost to the purchaser, upon giving a notice pursuant to sub-clause 13.25.4.

13.25.8 The supplier agrees that neither the execution of a test and/or inspection of the goods / related services or any part thereof, nor the attendance by the purchaser or its representative, nor the issue of any report pursuant to sub-clause 13.25.6, shall release the supplier from any warranties or other obligations under the contract.

13.26 Liquidated Damages & Penalty

13.26.1 Except as provided under GCC clause 13.31, if the supplier fails to deliver any or all of the goods or perform the related services within the period specified in the contract, the purchaser may without prejudice to all its other remedies under the



contract, deduct from the cost value of the balance goods or services not put to the commercial use as liquidated damages, a sum equivalent to 0.5% beyond stipulated delivery schedule for each week or part thereof of delay until actual delivery or performance, subject to a maximum of 10% of value of total contract price. Liquidated damages shall be levied for the delays attributable to FMS &AMS vendor.

13.26.2 In addition, the supplier is liable to the purchaser for payment penalty as specified in the SLA.

13.26.3 If the goods and related services supplied do not meet the minimum specifications as per the contract, and the same is not replaced/modified by the supplier to meet the requirements within 14 days of being informed by the utility, the utility shall be free to impose any penalty as deemed fit. In addition, the utility shall reserve the right to terminate the contract and recover liquidated damages by forfeiting the performance guarantee submitted by the purchaser.

13.27 Warranty

13.27.1 The supplier warrants that all the goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the contract.

13.27.2 Subject to GCC sub-clause 13.21.1, the supplier further warrants that the goods shall be free from defects arising from any act or omission of the supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of final destination.

13.27.3 The warranty shall remain valid for the period specified in chapter 5, scope of work.

13.27.4 The purchaser shall give notice to the supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The purchaser shall afford all reasonable opportunity for the supplier to inspect such defects.

13.27.5 In case any damage or defect is found during verification after receipt of material at Purchaser's stores or material develops defects within warranty period, the supplier shall attend/replace such defects free of all charges within 30 days of being notified by the Purchaser, of the occurrence of such defects. In case the defect is not attended or replacement of material is not received within specified period, then apart from encashing the performance security deposit, the Purchaser may also take suitable penal action including debarring from all future business.

13.27.6 If having been notified, the supplier fails to remedy the defect within the period of warranty specified in sub-clause 13.27.5; the purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the supplier's risk and expense and without prejudice to any other rights which the purchaser may have against the supplier under the contract.



13.28 Liability/Indemnity

- 13.28.1** The supplier hereby agrees to indemnify the purchaser, for all conditions and situations mentioned in this clause, in a form and manner acceptable to the purchaser. The supplier agrees to indemnify the purchaser and its officers, servants, agents (“Purchaser Indemnified Persons”) from and against any costs, loss, damages, expense, claims including those from third parties or liabilities of any kind howsoever suffered, arising or incurred inter alia during and after the contract period out of:
- a) Any negligence or wrongful act or omission by the supplier or its agents or employees or any third party associated with supplier in connection with or incidental to this contract; or
 - b) Any infringement of patent, trademark/copyright or industrial design rights arising from the use of the supplied goods and related services or any part thereof.
- 13.28.2** The supplier shall also indemnify the purchaser against any privilege, claim or assertion made by third party with respect to right or interest in, ownership, mortgage or disposal of any asset, property, movable or immovable as mentioned in any intellectual property rights, licenses and permits.
- 13.28.3** Without limiting the generality of the provisions of this clause 13.28.1 and 13.28.2, the supplier shall fully indemnify, hold harmless and defend the purchaser Indemnified persons from and against any and all suits, proceedings, actions, claims, demands, liabilities and damages which the purchaser indemnified persons may hereafter suffer, or pay by reason of any demands, claims, suits or proceedings arising out of claims of infringement of any domestic or foreign patent rights, copyrights or other intellectual property, proprietary or confidentiality rights with respect to any goods, related services, information, design or process supplied or used by the supplier in performing the supplier’s obligations or in any way incorporated in or related to the project. If in any such suit, action, claim or proceedings, a temporary restraint order or preliminary injunction is granted, the supplier shall make every reasonable effort, by giving a satisfactory bond or otherwise, to secure the suspension of the injunction or restraint order. If, in any such suit, action, claim or proceedings, the goods or related services, or any part thereof or comprised therein, is held to constitute an infringement and its use is permanently enjoined, the supplier shall promptly make every reasonable effort to secure for the purchaser a license, at no cost to the purchaser, authorizing continued use of the infringing work. If the supplier is unable to secure such license within a reasonable time, the supplier shall, at its own expense, and without impairing the specifications and standards, either replace the affected work, or part, or process thereof with non-infringing work or part or process, or modify the same so that it becomes non-infringing.



Survival on Termination

The provisions of this Clause 13.28 shall survive termination.

13.28.4 Defence of Claims

- a) If any proceedings are brought or any claim is made against the purchaser arising out of the matters referred to in GCC sub-clause 13.28.1, 13.28.2, or 12.28.3 the purchaser shall promptly give the supplier a notice thereof, and the supplier may at its own expense and in the purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.
- b) If the supplier fails to notify the purchaser within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the purchaser shall be free to conduct the same on its own behalf.
- c) The purchaser shall, at the supplier's request, afford all available assistance to the supplier in conducting such proceedings or claim, and shall be reimbursed by the supplier for all reasonable expenses incurred in so doing.

13.29 Limitation of Liability

13.29.1 Except in cases of gross negligence or wilful misconduct:

- a) Neither party shall be liable to the other party for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the supplier to pay liquidated damages to the purchaser.
- b) The aggregate liability of the supplier to the purchaser, whether under the contract, in tort, or otherwise, shall not exceed the amount specified in the contract price. Provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the supplier to indemnify the purchaser with respect to patent infringement.

13.30 Change in Laws & Regulations

13.30.1 Unless otherwise specified in the contract, if after the date of the Invitation for bids, any law, regulation, ordinance, order or bylaw having the force of law is enacted, promulgated, abrogated, or changed in the place of the purchaser's country where the site is located (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the delivery date, then such delivery date shall be correspondingly increased or decreased, to the extent that the supplier has thereby been affected in the performance of any of its obligations under the contract. .

13.31 Force Majeure

13.31.1 The supplier shall not be liable for forfeiture of its performance security, liquidated damages, or termination for default if and to the extent that it's delay in



performance or other failure to perform its obligations under the contract is the result of an event of force majeure.

13.31.2 For purposes of this clause, “force majeure” means an event or situation beyond the reasonable control of the supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the supplier. Such events may include, but not be limited to wars or revolutions, earthquake, fires, floods, epidemics, lockdowns, quarantine restrictions, and freight embargoes.

13.31.3 If a force majeure situation arises, the supplier shall promptly and no later than seven days from the first occurrence thereof, notify the purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the purchaser in writing, the supplier shall continue to perform its obligations under the contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the force majeure event.

13.31.4 The decision of the purchaser with regard to the occurrence, continuation, period or extent of force majeure shall be final and binding on the supplier.

13.32 Change Orders and Contract Amendments

13.32.1 The purchaser may at any time order the supplier through notice to make changes within the general scope of the contract in any one or more of the following:

- a) Drawings, designs, or specifications, where goods to be furnished under the contract are to be specifically manufactured for the purchaser.
- b) Specifications for hardware, software and related services.
- c) The method of shipment or packing.
- d) The place of delivery.
- e) The related Services to be provided by the supplier.

13.32.2 If any such change order causes an increase or decrease in the cost of, or the time required for, the supplier’s performance of any provisions under the contract, an equitable adjustment shall be made in the contract price or in the delivery and completion schedule, or both, and the contract shall accordingly be amended. Any claims by the supplier for adjustment under this Clause must be asserted within twenty-eight (28) days from the date of the supplier’s receipt of the purchaser’s change order.

13.32.3 No variation or modification of the terms of the contract shall be made except by written amendment signed by the parties.

13.33 Extension of Time

13.33.1 If at any time during performance of the contract, the supplier or its subcontractors should encounter conditions impeding timely delivery of the goods or completion of related services pursuant to GCC clause 13.11, the supplier shall promptly notify the purchaser in writing of the delay, its likely duration, and its cause. As soon as practicable after receipt of the supplier’s



notice, the purchaser shall evaluate the situation and may at its discretion extend the supplier's time for performance, in which case the extension shall be ratified by the parties by amendment of the contract.

- 13.33.2** Except in case of force majeure, as provided under GCC clause 13.31 or where the delay in delivery of the goods or completion of related services is caused due to any delay or default of the purchaser, any extension granted under clause 12.33.1 shall not absolve the supplier from its liability to the pay of liquidated damages pursuant to GCC clause 13.26.

13.34 Termination

13.34.1 Termination for default

- a) The purchaser may, without prejudice to any other remedy for breach of contract, by notice of default sent to the supplier, terminate the contract in whole or in part:
- i. If the supplier fails to deliver any or all of the goods or related services within the period specified in the contract, or within any extension thereof granted by the purchaser pursuant to GCC clause 13.33; or
 - ii. If the supplier, in the judgment of the purchaser has engaged in corrupt, fraudulent, collusive, or coercive practices, as defined in GCC clause 13.3, in competing for or in executing the contract; or
 - iii. Any representation made by the bidder in the proposal is found to be false or misleading
 - iv. If the supplier commits any breach of the contract and fails to remedy or rectify the same within the period of two weeks (or such longer period as the purchaser in its absolute discretion decide) provided in a notice in this behalf from the purchaser as specified in the SLA.
- b) In the event, the purchaser terminates the contract in whole or in part, pursuant to point no. (i) of GCC clause 13.34.1, the purchaser may procure, upon such terms and in such manner as it deems appropriate, goods or related services similar to those undelivered or not performed, and the supplier shall be liable to the purchaser for any additional costs for such similar goods or related services. However, the supplier shall continue performance of the contract to the extent not terminated.

13.34.2 Termination for insolvency

The purchaser may at any time terminate the contract by giving notice to the supplier if the supplier becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to the supplier, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to the purchaser.

13.34.3 Termination for convenience

- a) The purchaser, by notice sent to the supplier, may terminate the contract, in whole or in part, at any time for its convenience. The notice of termination shall



specify that termination is for the purchaser's convenience, the extent to which performance of the supplier under the contract is terminated, and the date upon which such termination becomes effective.

- b) The goods and services that are complete and ready for shipment within twenty-eight (28) days after the supplier's receipt of the Notice of termination shall be accepted by the purchaser at the contract terms and prices. For the remaining goods and services, the purchaser may elect:
 - i. To have any portion completed and delivered at the contract terms and prices; and/or
 - ii. to cancel the remainder and pay to the supplier an agreed amount for partially completed goods and related services and for materials and parts previously procured by the supplier.

13.34.4 Consequences of termination

Upon termination of the contract, the supplier shall:

- a) Prepare and present a detailed exit plan within five calendar days of termination notice receipt to the CIO or designated Officer of UPCL ("Exit Plan").
- b) The CIO or designated officer and along with designated team will review the exit plan. If approved, supplier shall start working on the same immediately. If the plan is rejected, supplier shall prepare alternate plan within two calendar days. If the second plan is also rejected, CIO or designated officer or the authorised person will provide a plan for Supplier and it should be adhered by in totality.
- c) The exit plan should cover at least the following
 - i. Execute all documents that may be necessary to effectively transfer the ownership and title, including OEM warranties in respect of all equipment.
 - ii. Handover all developed codes, related documentation and other configurable Items, if any in his possession.
 - iii. Handover the list of all IT Assets, passwords at all locations to the purchaser.
- d) The supplier and CIO (or the authorised person) will sign a completion certificate at the end of successful completion (all points tracked to closure) of the exit plan.

13.35 Assignment

- 13.35.1** The supplier shall not assign, in whole or in part, their obligations under this contract.

13.36 Disclaimer

- 13.36.1** Purchaser reserves the right to share, with any consultant of its choosing, any resultant proposals in order to secure expert opinion. Any consultants of the



Purchaser as referred to above shall be bound by confidentiality obligations and shall not disclose Supplier's proposal with any third party

- 13.36.2** Purchaser reserves the right to accept any proposal deemed to be in the best interest of UPCL.

13.37 Public Disclosure

- 13.37.1** All materials provided to the purchaser by bidder are subject to country and State public disclosure laws such as RTI etc.
- 13.37.2** The supplier's team shall not make or permit to be made a public announcement or media release about any aspect of this contract unless the purchaser first gives the supplier its written consent.

13.38 SLA Audit

- 13.38.1** A designated team / person from UPCL will review the performance of supplier against the SLA each month. The review / audit report will form basis of any action relating to imposing penalty on or breach of contract of the supplier.

13.39 Adherence to Safety Procedures, Rules, Regulations, & Restrictions

- 13.39.1** Supplier shall comply with the provision of all laws including labour laws, rules, regulations and notifications issued there under from time to time. All safety and labour laws enforced by statutory agencies and by purchaser shall be applicable in the performance of this contract and supplier's team shall abide by these laws.
- 13.39.2** Access to the data centre sites and purchaser's locations shall be strictly restricted. No access to any person except the essential personnel belonging to the supplier who are genuinely required for execution of work or for carrying out management/maintenance who have been explicitly authorised by the purchaser shall be allowed entry to the data centre sites and some purchaser's locations. Even if allowed, access shall be restricted to the pertaining equipment of the purchaser only. The supplier shall maintain a log of all activities carried out by each of its personnel.
- 13.39.3** The supplier shall take all measures necessary or proper to protect the personnel, work and facilities and shall observe all reasonable safety rules and instructions. Supplier's team shall adhere to all security requirement/regulations of the purchaser during the execution of the work. Purchaser's employee also shall comply with safety procedures/policy.
- 13.39.4** The supplier shall report as soon as possible any evidence, which may indicate or is likely to lead to an abnormal or dangerous situation and shall take all necessary emergency control steps to avoid such abnormal situations.
- 13.39.5** The purchaser will be indemnified for all the situations mentioned in this clause in the similar way as defined in GCC clause 13.29.



13.40 Non-solicitation of Staff

13.40.1 For the purpose of this contract, both parties to this contract agree, not to solicit either directly or indirectly with a view to provide or offer employment to, offer to contract with or entice a staff member of the other party to leave without the consent of the other during the term of this agreement and for an additional period of 180 days after termination.

13.41 Survival

13.41.1 The clauses of this contract, which by nature are intended to survive termination of this contract, shall remain in effect after such termination

14 Schedules

14.1- Schedule – I –Payment Schedule

The successful bidder will sign a Service Level Agreement (SLA) with UPCL covering all the required services. The payment schedule and milestones are divided into following table:

Phase	Activity	Payment Schedule	Milestones
Quarterly Facility Management Charges	Submission of Service Level Reports and other monthly level reports.	Quarterly Cost to be calculated by dividing total FMS Annual Cost divided by 4 (Four).	Approval of Service Level Reports by IT/RAPDRP-A wing of UPCL
Quarterly Annual Maintenance Cost call center software	Submission of Service Level Agreement of AMC	Quarterly Cost to be calculated by dividing total AMC one-year cost divided by 4 (Four).	Approval of Service Level Reports by IT/RAPDRP-A wing of UPCL
Hardware and Software on OPEX/Rental Mode (for the period of 1 (one) year	Supply, installation and commissioning of supplied hardware	The annual cost shall be divided in monthly payout (Total Cost of section D of BoQ / 12 months) upto the	After commissioning of all hardware and software mentioned in Opex and capex (Section-D and E of



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		<p>FMS period and shall be paid quarterly after commissioning which shall be confirmed by UPCL.</p> <p>The bidder shall raise the first invoice for opex mode rental only after commissioning of all hardware and software mentioned in Opex and capex (Section-D and E of BoQ).</p> <p>For first month, the bidder shall calculate the rental on pro-rata basis ((Total cost of Opex (section-D of BoQ)/365) X no. of days of month for which rental is to be paid)</p> <p>UPCL shall not pay any rent for commissioning period.</p>	BoQ) which shall be confirmed by UPCL.
Hardware on CAPEX mode	Supply, installation and commissioning of supplied hardware		<p>60 % on delivery and installation for all hardware and software mentioned in Opex and capex (Section-D and E of BoQ) and after submission of warranty documents for capex hardware/software.</p> <p>40% commissioning of all the hardware and completion of migration activity and on approval from UPCL.</p>

Note:

1. **UPCL shall calculate the sub total of all the sections of BoQ manually. Cost of section (A+B+C) should not exceed 63% of total cost. Cost of section D and E should not exceed 24% and 13% of total cost respectively. In case the bidder does not quote in above ratio, UPCL shall adjust the amount in same ratio as above for making the payment during the contract period.**
2. **The milestone for supply of hardware, software as mentioned in BoQ as capex (E) and opex (D) shall be considered complete only after supply and installation of all the hardware and software.**
3. **The milestone for migration, replication and commissioning shall be considered complete only after the commissioning of all the hardware and software in capex and opex mode. The same shall be confirmed by UPCL.**
4. **Penalty- 0.5% per week for the delayed work subject to maximum of 10% of total capex and opex cost (cost of section-D + cost of section E of BoQ)**
5. **In case the supplied hardware on rental mode fail due to any reason whatsoever leading to break in DC operations, the bidder shall be required to immediately replace/ repair and resume the services within 24 hrs. and after that a penalty of 1% of the total contract value per day shall be applicable**



14.2- Schedule II – Service Level Agreement

This SLA shall be between selected bidder and UPCL.

Table 1: Service Level Parameters for Facility Management Services & Technical Support Services

S. No	Service	Parameter	Service Level	Validation	Penalty	Remarks
1	Help desk	Network & Other Tickets Resolution of ticket logged as per the Severity Definition Chart	99%	Reports generated from Ticket logging system	95%-99% calls resolved in specified time – 2% penalty on monthly FMS charges.	Excluding Hardware Faults
					90%-95% calls resolved in specified time – 5% penalty on monthly FMS charges	
					Below 90% calls resolved in specified time – 10% penalty on monthly FMS charges	
2	Help desk	Application and Mobile APP Related Tickets Resolution of ticket logged as per the Severity Definition Chart	98%	Reports generated from Ticket logging system	95%-98% calls resolved in specified time – 2% penalty on monthly FMS charges.	
					90%-95% calls resolved in specified time – 5% penalty on monthly FMS charges	
					85%-90% calls resolved in specified time – 10% penalty on monthly FMS charges Below 85% calls resolved in specified time – 15% penalty on monthly FMS charges	
3	New Development & Integration Works under Technical Support	Work breakdown schedule with defined timelines	Agreed Timeline with UPCL		Delay in development & integration work shall not go beyond the 110% of the mutually agreed timeline. In case of delay Rs. 2500.00 shall be levied as penalty for each day of default.	
4	Install, Moves, Add, Changes (IMAC) Services	Should be part of Monthly Project Status Report		Report	0.2% of monthly FMS charges	
5	Asset/ Inventory Management	Provide Monthly MIS Asset Inventory		Report	0.2% of monthly FMS charges	DC & DR server, hardware and software details reports as per agreed format.
		Conduct Annual Physical Asset Verification	100%	Management Approval of Physical Asset Verification report	0.5% of yearly FMS charges	
6	Supplier Management Service	Tracking of supplier SLA & ticket logged with supplier		Status of tickets logged with supplier	0.5% of monthly FMS charges	



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S. No	Service	Parameter	Service Level	Validation	Penalty	Remarks
		MIS reporting on AMC tenure, License fees		Status of tickets logged with supplier	0.2% of monthly FMS charges	
7	Desk side Technical support services	Resolution of ticket logged as per the Severity definition chart		Reports generated from Ticket logging system	1% of Monthly FMS Charges	
8	Antivirus Management	Rollout of latest anti-Virus definition of file on workstation and servers on being made available on Supplier's website		Reports generated from Anti Virus software console	1% of Monthly FMS Charges	
9	Network monitoring and management	SI to monitor the availability of the network link for 99 % uptime, IS should measure link availability on monthly basis		Downtime reports Reports on the network performance	Penalty of 2% per month will be deducted from the monthly FMS charges if the reports are not submitted by the SI.	
10	Data Center Operation	MIS reporting on physical and environmental conditions control		Report	0.2% of Monthly FMS Charges	DC/DR temperature and server health monitoring report to be submitted on daily/monthly basis
11	Server Administration / Management	Rollout of patches (OS, infra level) on workstation and Servers after patch being approved on test environment.		Patch Update report	0.5% of Monthly FMS Charges	monthly report need to submit with patch details in servers and desktops.
		Uptime of Application servers		Report	2% of Monthly FMS Charges	Need to generate uptime reports of application Servers excluding hardware problem.
		Uptime of UPCL servers except e-mail		Report	2% of Monthly FMS Charges	
12	Database Administration Services	MIS report of Database scheme, disk space, storage and user role		Report	0.5% of Monthly FMS Charges	Daily and Monthly reports to be submitted as per agreed format.
13	DC-DR MOCK DRILL	As per the agreed timelines with UPCL	100%	Successful Operations from DR Center to the satisfaction of UPCL for defined period preferably twice in a year	0.5 % of the Annual FMS Cost to be deducted from the bills of corresponding quarter	Demonstration & verification of replicated data in DR
14	Backup/ Restore Management	The supplier should take backup as per the backup schedule defined by UPCL		Report	If the negligence is found in the monthly audit, the ITIA would be penalized a sum of Rs 5000/- per negligence.	Daily backup reports and weekly backup submission



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S. No	Service	Parameter	Service Level	Validation	Penalty	Remarks
		UPCL would periodically (once a quarter on random day) request the supplier to restore the data backup		Report	Rs 5000/- for every restore test failure	
15	Mail Messaging system	Uptime of email server		Report	2% of Monthly FMS Charges	Excluding Hardware faults
		Provide Monthly MIS of User account and mailboxes created /deleted		Report	0.2% of Monthly FMS Charges	
16	Management of UPCL's EMS	Daily MIS of server and device health check-up (CPU, disk space, memory utilization, I/O utilization, central storage etc.)		Reports generated from EMS system	0.5% of Monthly FMS Charges	
17	Security Management	Should be part of Monthly status report	95%	Report	0.2% of Monthly FMS Charges	VPN id reports, IDAM reports as per agreed format
18	Resource Management	Number of Shift days for which resource present at designated location/ Total number of shift days		Attendance Track Measured on a monthly basis	If the resource is absent beyond permissible leave days, than for first fifteen days payment shall be deducted at the rate of Rs. 2500.00 per manpower resource for each day of absence & in case of absent/non-deployment beyond fifteen days Rs. 5000.00 per manpower resource for each day of absence shall be deducted. The attendance shall generally be tracked through as per agreed format however, under exceptional situations concerned UPCL official shall have discretion to decide on the attendance of any resource.	Deployed manpower will be eligible for two-day causal leave per month. In case of any change in resource deployment, the same should be informed to UPCL. However, UPCL reserve the right to consider the request of successful bidder on case to case basis.
		Resource provided is not as per specified certification / experience		Experience/certificate of FMS personnel submitted by Supplier to UPCL.		

Note: The overall SLA penalty for the FMS service during the quarter shall be calculated on monthly basis and shall not exceed the 15% value of FMS cost. (Excluding Point No. 18 Resource Management)

Table 2: Service Level Parameters for Annual Maintenance Support (AMS) of Call center software etc.

S.No	Service Severity Level	Service Description	Service Level	Service Handling Procedure	Penalty
1.	Critical	Application software (module) is unable to be used for normal business activities. There is certainty of financial loss to UPCL.	99 %	AMS vendor will acknowledge with 90 minutes upon logging the request in AMS trouble ticket logging system by UPCL/authorized party; and shall remedy defects and/or provide a workaround within 3 working hours (issue resolution time) of notification of the problem.	SLA from 99 to 100 % No Penalty SLA Below 99% Penalty shall be calculated as (100-% Service Level achieved) of Monthly AMC value. Maximum upto 10% of the due Monthly AMS amount.
2.	Urgent	There is a problem with part of the application, which impacts on UPCL's decision making. No viable work around is available. There is a likelihood of financial loss.	97%	AMS vendor will acknowledge within 2 hours from the time that the request was logged in AMS' trouble ticket logging system and shall remedy defects and/or provide a workaround within 6 working hours (Issue resolution time).	SLA from 97 to 100 % No Penalty SLA Below 97% Penalty shall be calculated as (100-% Service Level achieved) of Monthly AMC value. Maximum upto 10% of the due Monthly AMS amount.
3.	High	The efficiency of users is being impacted, but there is a viable workaround.	95%	AMS vendor will acknowledge with 4 hours from the time that the request was logged in AMS trouble ticket logging system and shall remedy defects and/or provide a workaround within 18 working hours (Issue resolution time).	SLA from 95 to 100 % No Penalty SLA Below 95% Penalty shall be calculated as (100-% Service Level achieved) of Monthly AMC value. Maximum upto 10% of the due Monthly AMS amount.
4.	Medium	A low impact problem that affects the efficiency of user but has a simple workaround.	93%	AMS vendor will acknowledge within 5 working hours from the time that the request was logged in AMS trouble ticket logging system and shall remedy defects and/or provide a workaround within 3 working days (Issue resolution time).	SLA from 93 to 100 % No Penalty SLA Below 93% Penalty shall be calculated as (100-% Service Level achieved) of Monthly AMC value. Maximum upto 10% of the due Monthly AMS amount.
5.	Low	A fault which has no particular impact on processing of normal business activities.	91%	AMS will acknowledge within 5 working hours from the time that the request was logged in AMS trouble ticket logging system and shall remedy defects and/or provide a workaround within 7 working days (Issue resolution time).	SLA from 91 to 100 % No Penalty SLA Below 91% Penalty shall be calculated as (100-% Service Level achieved) of Monthly AMC value. Maximum upto 10% of the due Monthly AMS amount.

Note::

1. The overall SLA penalty for the Annual Maintenance Support (AMS) for Call center software during the quarter shall be calculated on monthly basis and shall not exceed the 15% value of AMC cost.
2. *Service Level Agreement can be reviewed during the contract period on arising any difficulty after mutual consent between UPCL and FMS & AMS vendor.*



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15- Forms

Technical Proposal shall comprise of following forms:

Forms to be used in Technical Proposal

1. Form 1: Undertaking on Total Responsibility
2. Form 2: Letter of Proposal
3. Form 3: Declaration that the bidder has not been blacklisted
4. Form 4: Project/work citation format
5. Form 5: Proposed Solution
6. Form 6: Proposed Work Plan
7. Form7: Team Composition to deliver FMS & AMC services and Mobile development in separate tables.
8. Form 8: CV of the Key Professionals (To be signed by resource and counter signed by authorised signatory)
9. Form 9: Deployment Plan of Personnel (Bidder to submit resource deployment plan)
10. Form 10: Manufacturers Authorisation Form (MAF)
11. Form 11: Declaration on Source Code and Intellectual Property Rights



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12. Form 12: Bid Validity on stamp paper of Rs. 100/-
13. Form 13: Correctness of bid on stamp paper of Rs. 10/-
14. Form 14: Pre-qualification compliance of FMS & AMS vendor.
15. Form 15: Format for submitting clarification/queries

UPCL



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Form 1: Undertaking on Total Responsibility

No.

Date:

To:

Uttarakhand Power Corporation Limited,
V.C.V Gabar Singh Urja Bhawan, Kanwali Road, Dehradun,
Uttarakhand

Dear Sir,

Sub: Self certificate regarding Total Responsibility

This is to certify that we undertake total responsibility for the successful development and hassle free FMS and AMS operations of the proposed work solution, as per the requirements of the RFP for "Facility Management Services, Technical Support Services & AMC of Call Centre Software and provision of hardware & software for operation of DC Dehradun, DRC Haldwani & field offices of UPCL."

Thanking you,

Yours faithfully

(Signature of the Authorized signatory of the Bidding Organisation)

Name :
Designation :
Date :
Time :
Seal :
Business Address:



Appointment of IT Agency for Appointment of an IT Agency for Facility Management Services, Technical Support Services & AMC of Call Centre Software and provision of hardware & software for operation of DC, Dehradun, DRC, Haldwani & field offices of UPCL for a period of 01 year

Form 2: Letter of Proposal

To:

Uttarakhand Power Corporation Limited,
V.C.V Gabar Singh Urja Bhawan, Kanwali Road, Dehradun,
Uttarakhand

Subject: Submission of the Technical bid for <Name of the FMS assignment>

Dear Sir/Madam,

We, the undersigned, offer "Facility Management Services, Technical Support Services & AMC of Call Centre Software and provision of hardware & software for operation of DC Dehradun, DRC Haldwani & field offices of UPCL" on behalf of <Name of the FMS & AMS vendor> with your Request for Proposal dated <insert date> and our Proposal. We are hereby submitting our Proposal, which includes this Technical bid and the Financial Bid.

We hereby declare that all the information and statements made in this Technical bid are true and accept that any misinterpretation contained in it may lead to our disqualification.

We undertake, if our Proposal is accepted, to initiate the Implementation of services related to the assignment not later than the date indicated in Fact Sheet.

We hereby declare that we are not insolvent, in receivership, bankrupt or being wound up, our affairs are not being administered by a court or a judicial officer, our business activities have not been suspended and we are not the subject of legal proceedings for any of the foregoing.

We declare that this is our sole participation in this RFP bid and we are not participating/co-participating through any of other related party or channel.

We understand you are not bound to accept any Proposal you receive.

Yours sincerely,

Authorized Signature [*In full and initials*]: _____

Name and Title of Signatory: _____

Name of Firm: _____

Address: _____

Location: _____ Date: _____



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Form 3: Declaration that the bidder has not been blacklisted

To be submitted on the Letterhead of the responding agency)

{Place}

{Date}

To,

Uttarakhand Power Corporation Limited,
V.C.V Gabar Singh Urja Bhawan, Kanwali Road, Dehradun,
Uttarakhand

Ref: RFP Notification no <xxxx> dated <dd/mm/yy>

Subject: Self Declaration of not been blacklisted in response to the **RFP** for “Facility Management Services, Technical Support Services & AMC of Call Centre Software and provision of hardware & software for operation of DC Dehradun, DRC Haldwani & field offices of UPCL”

Dear Sir,

We confirm that our company, _____, is not blacklisted in any manner whatsoever by any of the State/UT and/or central government in India on any ground including but not limited to indulgence in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice.

Place:

Date:

Bidder's Company Seal:

Authorized Signatory's Signature:

Authorized Signatory's Name and Designation:

Note: The Bidder shall necessarily provide a copy of 'Power of Attorney' authorizing the signatory for signing the Bid on behalf of the Bidder in its Pre-Qualification Bid.



Form 4: Project/Work Citation Format

Relevant IT Services Experience	
General Information	
Name of the project/work	
Client for which the project/work was executed	
Name and contact details with phone no. of the client	
Project Details	
Description of the project/work	
Scope of services	
Other Details	
Total cost of the project/work	
Duration of the project (no. of months, start date, completion date, current status)	
Other Relevant Information	
Letter from the client to indicate the successful completion of the projects/works	
Copy of Work Order	

Form 5 : Proposed Solution

Technical Approach, Methodology and Work Plan are key components of the Technical Proposal. You are suggested to present Approach and Methodology divided into the following sections:

- Understanding of Objectives of UPCL for Facility Management Services, Technical Support Services & AMC of Call Centre Software and provision of hardware & software for operation of DC Dehradun, DRC Haldwani & field offices of UPCL.
- Approach & Methodology for Facility Management Services, Technical Support Services & AMC of Call Centre Software and provision of hardware & software for operation of DC Dehradun, DRC Haldwani & field offices of UPCL
- Detailed Plan
- Proposed Team Structure and other details

Form 6: Proposed Work Plan (Bidder has to proposed his methodology to carry out scope of work)

Form 7: Team Composition to deliver Facility Management Services, Technical Support Services & AMC of Call Centre Software and provision of hardware & software for operation of DC Dehradun, DRC Haldwani & field offices of UPCL in separate tables

Name of Staff with qualification and experience	Area of Expertise	Position Assigned	Task Assigned	Time committed for the engagement



Form 8: CV of Key Professionals (To be signed by resource and counter signed by authorised signatory)

General Information	
Name of the person	
Current Designation / Job Title	
Current job responsibilities	
Proposed Role in the Project	
Proposed Responsibilities in the Project	
Academic Qualifications: <ul style="list-style-type: none"> • Degree • Academic institution graduated from • Year of graduation • Specialization (if any) • Key achievements and other relevant information (if any) 	
Professional Certifications (if any)	
Total number of years of experience	
Number of years with the current company	
Summary of the Professional / Domain Experience	
Number of complete life cycle implementations carried out	
The names of customers (Please provide the relevant names)	
Past assignment details (For each assignment provide details regarding name of organizations worked for, designation, responsibilities, tenure) <p>Prior Professional Experience covering:</p> <ul style="list-style-type: none"> • Organizations worked for in the past <ul style="list-style-type: none"> ○ Organization name ○ Duration and dates of entry and exit ○ Designation & Location(s) ○ Key responsibilities • Prior project experience <ul style="list-style-type: none"> ○ Project name ○ Client ○ Key project features in brief ○ Location of the project ○ Designation ○ Role ○ Responsibilities and activities ○ Duration of the project <p>Please provide only relevant projects.</p>	
Proficient in languages (Against each language listed indicate if speak/read/write)	



Form 9: Deployment Plan of Personnel(Bidder to submit resource deployment plan)

Form 10: MAF (Manufacturer's Authorization Form) –

(This form has to be provided by the OEMs for AMC)

No. Date:

To:

Uttarakhand Power Corporation Limited,
V.C.V Gabar Singh Urja Bhawan, Kanwali Road, Dehradun,
Uttarakhand

OEM Authorization Letter

Dear Sir:

Ref: Your RFP Ref: [*] dated [*]

We who are established and reputable manufacturers / producers of _____ having factories / development facilities at (*address of factory / facility*) do hereby authorize M/s _____ (*Name and address of Agent*) to submit a Bid, and sign the contract with you against the above Bid Invitation.

We hereby extend our full guarantee and warranty for the Solution, Products and services offered by the above firm against this Bid Invitation.

We hereby declare that we are not insolvent, in receivership, bankrupt or being wound up, our affairs are not being administered by a court or a judicial officer, our business activities have not been suspended and we are not the subject of legal proceedings for any of the foregoing.

We also undertake to provide any or all of the following materials, notifications, and information pertaining to the Products manufactured or distributed by the Supplier:

- a. Such Products as UPCL may opt to purchase from the Supplier, provided, that this option shall not relieve the Supplier of any warranty obligations under the Contract; and
- b. in the event of termination of production of such Products:
 - i. Advance notification to UPCL of the pending termination, in sufficient time to permit UPCL to procure needed requirements; and
 - ii. Following such termination, furnishing at no cost to UPCL, the blueprints, design documents, operations manuals, standards, source codes and specifications of the Products, if requested.

We duly authorize the said firm to act on our behalf in fulfilling all installations, Technical support and maintenance obligations required by the contract.

Yours faithfully,

(Name)

(Name of Producers)

Note: This letter of authority should be on the letterhead of the manufacturer and should be signed by a person competent and having the power of attorney to bind the manufacturer. The Bidder in its Bid should include it.



Appointment of IT Agency for Appointment of an IT Agency for Facility Management Services, Technical Support Services & AMC of Call Centre Software and provision of hardware & software for operation of DC, Dehradun, DRC, Haldwani & field offices of UPCL for a period of 01 year

Form 11: Declaration on Source Code and Intellectual Property Rights

No.

Date:

To:

Superintending Engineer (R-APDRP Part-A)
Uttarakhand Power Corporation Limited,
V.C.V Gabar Singh Urja Bhawan, Kanwali Road, Dehradun,
Uttarakhand

Dear Sir,

Sub: Self-certificate regarding the source code and Intellectual property rights under this Project

I, authorized representative of _____, hereby solemnly affirm to the IPR and Source Code rights as defined in this RFP document.

In the event of any deviation from the factual information/ declaration, UPCL. reserves the right to take necessary legal action.

Thanking you,
Yours faithfully

(Signature of the Authorized signatory of the Bidding Organisation)

Name :
Designation :
Date :
Time :
Seal :
Business Address:



Appointment of IT Agency for Appointment of an IT Agency for Facility Management Services, Technical Support Services & AMC of Call Centre Software and provision of hardware & software for operation of DC, Dehradun, DRC, Haldwani & field offices of UPCL for a period of 01 year

Form 12: Bid Validity on stamp paper of Rs. 100/-

(To be furnished by the bidder on non-judicial stamp paper of Rs. 100/- [Rs. One Hundred only] affixing a revenue stamp of Re. 1/-)

AGREEMENT FOR VALIDITY

Bid invited by : _____

Bid for : _____

Bid Notice

No. & Date : _____

Name of Bidder : _____

In consideration of UPCL having treated the bidder to be an eligible person whose bid may be considered, the bidder hereby agrees to the conditions that the proposal in response to the above invitation shall not be withdrawn within 6 months from the date of submission of the bids by bidders, also to the conditions that if the bidder does withdraw their proposal within the said period, the earnest money deposited by them may be forfeited by the UPCL.

Signed this _____ day of _____

Witness:

1. _____

2. _____

Signature(s) of bidder (s) in full address with seal



Appointment of IT Agency for Appointment of an IT Agency for Facility Management Services, Technical Support Services & AMC of Call Centre Software and provision of hardware & software for operation of DC, Dehradun, DRC, Haldwani & field offices of UPCL for a period of 01 year

Form 13: Correctness of bid on stamp paper of Rs. 10/-

(To be furnished by the bidder on non-judicial stamp paper of Rs. 10/- [Rs Ten only] affixing a revenue stamp of Re. 1/-)

Declaration for correctness of Information

Bid invited by : _____

Bid for : _____

Tender Notice

No. &Date : _____

Name of bidder : _____

All the documents submitted for NIT no. ... are correct and true & If any document is found to be wrong, UPCL Ltd., may disqualify the bid. If the Contract/agreement has been signed, the same will be cancelled and appropriate action will be taken as per GoU rules and procedures.

Signature(s) of bidder (s) in full address with seal



Appointment of IT Agency for Appointment of an IT Agency for Facility Management Services, Technical Support Services & AMC of Call Centre Software and provision of hardware & software for operation of DC, Dehradun, DRC, Haldwani & field offices of UPCL for a period of 01 year

Form 14: Pre-qualification compliance of FMS & AMS vendor

The bidder has to provide the details of PQR supporting documents in the following format

PQR Clause Ref	Pre-qualification Criteria description	Supporting Document	Compliance (Yes / No)	Pageat which document provided as part of Technical Proposal

Form 15: Format for submitting clarification/queries

Bidders are required to send their queries /clarifications in the following format to UPCL e-mail id rapdrpparta@upcl.org before pre-bid conference. After that no query shall be considered by UPCL.

SNo.	Reference No.	Clause Description	Clarification Sought / query	Justification



Appointment of IT Agency for Appointment of an IT Agency for Facility Management Services, Technical Support Services & AMC of Call Centre Software and provision of hardware & software for operation of DC, Dehradun, DRC, Haldwani & field offices of UPCL for a period of 01 year

16. Annexures

Annexure 1: Format of Power of Attorney on stamp paper of Rs. 100/-

We, having its office at, hereby authorize and empower Mr./Ms.....to sign and conclude the proposal to be submitted to UPCL in response to its Request for Proposal for "Appointment of an IT Agency for Facility Management Services, Technical Support Services & AMC of Call Centre Software and provision of hardware & software for operation of DC, Dehradun, DRC, Haldwani & field offices of UPCL for a period of 01 year" published on and subsequent corrigenda and we hereby agree to abide by and ratify and act upon such proposal in terms of what is stated therein.

Yours Sincerely

Authorized signatory from Board

UPCL



Appointment of IT Agency for Appointment of an IT Agency for Facility Management Services, Technical Support Services & AMC of Call Centre Software and provision of hardware & software for operation of DC, Dehradun, DRC, Haldwani & field offices of UPCL for a period of 01 year

Annexure 2: Financial Bid Template (To be submitted ONLINE only)

The bidders are expected to respond to the RFP using the forms given in this section and all supporting documents for Financial Bid Evaluation.

Below form is for reference purpose only. Bidders have to submit the financial bid separately as per the Bill of Quantity (BOQ) uploaded on the tender portal. In case, bidders submit the financials along with technical bid in hard/soft copy, their bids shall be summarily rejected.

<div style="display: flex; justify-content: space-between;"> Validate Print Help </div> <p>Tender Inviting Authority: Superintending Engineer(RAPDRP-A), Uttarakhand Power Corporation Limited, V.C.V Gabar Singh Urja Bhawan, Kanwali Road, Dehradun-248001</p> <p>Name of Work: Appointment of an IT Agency for Facility Management Services, Technical Support Services & AMC of Call Centre Software and provision of hardware & software for operation of DC Dehradun, DRC Haldwani & field offices of UPCL for a period of 01 year</p> <p>Tender identification no.: 02 /RAPDRP-A/2024-25 dated: 22/02/2025</p>										
<p>Name of the Bidder/ Bidding Firm /</p>										
<p>PRICE SCHEDULE (This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)</p> <p>NOTE :</p> <p>1. Bidder has to enter unit rate in INR the Column M. Bidder has to enter unit GST rate in INR in column O.</p> <p>2. UPCL shall calculate the sub total of all the sections of BoQ manually. Cost of section (A+B+C) should not exceed 63% of total cost. Cost of section D and E should not exceed 24% and 13% of total cost respectively. In case the bidder does not quote in above ratio, UPCL shall adjust the amount in same ratio as above for making the payment during the contract period.</p>										
10	NUMBER #	TEXT #	NUMBER #	TEXT #	TEXT #	NUMBER #	NUMBER	NUMBER #	NUMBER #	TEXT #
	SI.No.	Item Description	Quantity	Units	Quoted Currency in INR / Other Currency	BASIC RATE of Figures To be entered by the Bidder (IN INR)	Unit Goods & Services Tax (GST) in INR	TOTAL AMOUNT Without Taxes in INR	TOTAL AMOUNT With Taxes in INR	TOTAL AMOUNT In Words
11	1	(A) IT Team to Manage Data Center, Dehradun (DC) and Disaster Recovery Center, Haldwani (DR) for Operational Activities								
14	1.01	Management of Servers at Data Center, Dehradun and DR Center, Haldwani (Windows/Linux/VM)	3	No.	INR			0.00	0.00	INR Zero Only
15	1.02	Security administrator (Antivirus/Firewall, Sophos/Mail)	2	No.	INR			0.00	0.00	INR Zero Only
16	1.03	Monitoring Tools (Network , server, LDAP etc.)	2	No.	INR		Rate Entry Please enter	0.00	0.00	INR Zero Only
17	1.04	Backup (TSM , Storage, SAN Switches and Tape Library).	1	No.	INR			0.00	0.00	INR Zero Only
18	1.05	Network Admin at DC and DR (Routers, Switches , VPN and Internet)	3	No.	INR			0.00	0.00	INR Zero Only
19	1.06	Database Administrator at Data Centre, Dehradun	2	No.	INR			0.00	0.00	INR Zero Only
20	1.07	Database Administrator (Offshore)	1	No.	INR			0.00	0.00	INR Zero Only
21	1.08	Load balancer Engineer	1	No.	INR			0.00	0.00	INR Zero Only
22	1.09	Call Center Operation Engineer (CUCM, SYNWAY Media Gateway/ SIP)	2	No.	INR			0.00	0.00	INR Zero Only
23	1.10	24x7 Network Operating Center at Data Center, Dehradun - Helpdesk including reliever	4	No.	INR			0.00	0.00	INR Zero Only
24	1.11	Application Support Team at Network Operating Center at Data Center, Dehradun	3	No.	INR			0.00	0.00	INR Zero Only
25	1.12	24x7 Network Operating Center at Disaster Recovery Center, Haldwani - Helpdesk including reliever	4	No.	INR			0.00	0.00	INR Zero Only
26	1.13	IT Support Staff at field Offices	18	No.	INR			0.00	0.00	INR Zero Only
27	1.14	Project Manager	1	No.	INR			0.00	0.00	INR Zero Only
28	2	(B) Application Development Team								
29	2.01	Application Developer for CSC/MIS	1	No.	INR			0.00	0.00	INR Zero Only
30	2.02	Application Developer for CSC/MIS (Offshore)	1	No.	INR			0.00	0.00	INR Zero Only
31	2.03	Application Developer for WSS	2	No.	INR			0.00	0.00	INR Zero Only
32	2.04	Application Developer for New Service Connection	1	No.	INR			0.00	0.00	INR Zero Only
33	2.05	Application Developer for Metering/DND/Collection	2	No.	INR			0.00	0.00	INR Zero Only
34	2.06	Application Developer for Billing	2	No.	INR			0.00	0.00	INR Zero Only
35	2.07	Application Developer for Billing (Offshore)	1	No.	INR			0.00	0.00	INR Zero Only
36	2.08	Application Developer for Energy Audit	1	No.	INR			0.00	0.00	INR Zero Only
37	2.09	GIS Developer for ARC-FM & ARC-GIS	1	No.	INR			0.00	0.00	INR Zero Only
38	2.10	Developer for UPCL website	1	No.	INR			0.00	0.00	INR Zero Only
39	2.11	CA Application Developer for Mobile(Functional & Admin)	1	No.	INR			0.00	0.00	INR Zero Only
40	2.12	CA Application Developer for Mobile(Functional & Admin) (Offshore)	1	No.	INR			0.00	0.00	INR Zero Only
41	2.13	Application Manager for complete suit	1	No.	INR			0.00	0.00	INR Zero Only
42	2.14	Business Analyst	2	No.	INR			0.00	0.00	INR Zero Only



उत्तराखण्ड पावर
कॉर्पोरेशन लि०

Appointment of IT Agency for Appointment of an IT Agency for Facility Management Services, Technical Support Services & AMC of Call Centre Software and provision of hardware & software for operation of DC, Dehradun, DRC, Haldwani & field offices of UPCL for a period of 01 year

43	2.15	GIS Executive	2	No.	INR			0.00	0.00	INR Zero Only
44	2.16	Angular Application Developer	1	No.	INR			0.00	0.00	INR Zero Only
45	2.17	Angular Application Developer (Offshore)	1	No.	INR			0.00	0.00	INR Zero Only
46	2.18	Application Tester for New Development	2	No.	INR			0.00	0.00	INR Zero Only
47	2.19	Application Tester for New Development (Offshore)	2	No.	INR			0.00	0.00	INR Zero Only
48	3	(C) IT Team to Manage Data Center, Dehradun (DC) and Disaster Recovery Center, Haldwani (DR) for Operational Activities								
49	3.01	AMC for Call Center software (40 concurrent users) for 1 year period	1	No.	INR			0.00	0.00	INR Zero Only
50	4	(D) Hardware and Software on OPEX/Rental Mode (for the period of 1 (one) year								
51	4.01	Additional storage --2 nos. WITH REPLICATION FEATURES (For DC AND DR to host Database and application server atleast 150 TB ALL FLASH STORAGE)	2	No.	INR			0.00	0.00	INR Zero Only
52	4.02	Cloud storage of 30 TB (usable) from MEITY empanelled cloud service provider for storing backup of important application from UPCL Data Center to Cloud location and its retrieval (as and when required) for the period of one year. The software required to copy the backup to cloud location shall be provided by the service provider.	1	No.	INR			0.00	0.00	INR Zero Only
53	4.03	Monitoring software for DC	1	No.	INR			0.00	0.00	INR Zero Only
54	4.04	BACKUP SOFTWARE	1	No.	INR			0.00	0.00	INR Zero Only
55	4.05	Identity and Access Management Software for UPCL billing Solution	1	No.	INR			0.00	0.00	INR Zero Only
56	4.06	Load Balancer/Web Application Firewall	2	No.	INR			0.00	0.00	INR Zero Only
57	4.07	Server Cyber Security Software with 1 year support	80	No.	INR			0.00	0.00	INR Zero Only

58	4.08	One time implementation and Data Migration Cost - Includes (Backup, IDAM Setup, Servers, Load balancer, Deep Security and Storage Data Migration Cost) (20% of total hardware and software cost on capex and rental mode)	1	No.	INR			0.00	0.00	INR Zero Only	
59	5	(E) Hardware on CAPEX mode									
60	5.01	IBM RISC server on power 10 Processor	1	No.	INR			0.00	0.00	INR Zero Only	
61	5.02	Backup server (including OS for server) to keep the backup as our tape libraries are already old	1	No.	INR			0.00	0.00	INR Zero Only	
62	5.03	XEON SERVER -4 Nos. with atleast Dual processor 32+32=64 core, 512 GB RAM, HBA controller and Virtualization software to create unlimited virtual machine of desired cores with no restriction on cores and resource allocation.)	4	No.	INR			0.00	0.00	INR Zero Only	
63	Total in Figures								0.00	0.00	INR Zero Only
64	Quoted Rate in Words								INR Zero Only		
65											



Annexure 3: Template for Earnest Money Deposit Bank Guarantee

BG No.

Dated:

BANK GUARANTEE FOR EARNEST MONEY

{To be submitted with Part- I}

To,

Uttarakhand Power Corporation Limited,
V.C.V Gabar Singh Urja Bhawan, Kanwali Road, Dehradun,
Uttarakhand

Sir

WHEREAS, a Company incorporated under the Indian Companies Act having its registered office at (Hereinafter called the "Bidder") has/have in response to your bid against specification No..... for "Appointment of an IT Agency for Facility Management Services, Technical Support Services & AMC of Call Centre Software and provision of hardware & software for operation of DC Dehradun, DRC Haldwani & field offices of UPCL for a period of 01 year" as requested in letter No. dated:

AND WHEREAS the Bidder is required to furnish to you a Bank Guarantee for the sum of Rs. _____/- (Rs ____ only) as Earnest Money against the Bidder's offer as aforesaid AND WHEREAS WeBank Ltd., have, at request of the Bidder, agreed to give you this guarantee as hereinafter contained.

NOW THEREFORE, in consideration of the premises, we Bank having its Registered office at, the undersigned hereby covenant that the aforesaid Proposal of the Bidder shall remain open for acceptance by you during the period of validity as mentioned in the Proposal or any extension thereof as you and the Bidder may subsequently agree and if the Bidder shall for any reason back out, whether expressly or impliedly, from his said bid during the period of its validity or any extension thereof as aforesaid we hereby guarantee to you the payment of the sum of Rs._____-/- on demand notwithstanding the existence of any dispute between UPCL, and the Bidder in this regard and we hereby further agree as follows: -

- a) That you may without affecting this guarantee grant time or other indulgence to or negotiate further with the Bidder in regard to the conditions contained in the said bid document and thereby modify these conditions or add these to any further conditions as may be mutually agreed upon between you and the Bidder.
- b) That the guarantee herein before contained shall not be affected by any change in the constitution of the Bidder.



Appointment of IT Agency for Appointment of an IT Agency for Facility Management Services, Technical Support Services & AMC of Call Centre Software and provision of hardware & software for operation of DC, Dehradun, DRC, Haldwani & field offices of UPCL for a period of 01 year

- c) That this guarantee commences from the date thereof and shall remain in force till the Bidder, if his proposal is accepted by you, furnishes the security as required under the said specifications and executes a formal agreement as therein provided or till six months after the period of validity or the extended period of validity, as the case may be, of the bid, whichever is earlier.
- d) That the expressions 'The Bidder' and the 'the Bank' and 'UPCL.' Herein used shall, unless such and interpretation is repugnant to the subject or context include their respective successors and assigns.
- e) That any account settled between you and the Bidder shall be conclusive evidence against us of ` the amount due hereunder and shall not be questioned by us.

Notwithstanding anything contained herein above our liability under this guarantee is restricted to Rs...../-(Indian Rupees only), and the guarantee shall remain in force up to (Claim period up to) Unless a claim or demand is received by us, at BANK, in writing on or before (Claim period up to), all your rights under the said guarantee shall be forfeited and we shall be released and discharged from all our liabilities there under.

For Bank



Annexure 4: Template for Performance Bank Guarantee (PBG)

THIS DEED OF GUARANTEE MADE ON THE..... Day of201.
By the (Hereinafter called 'the Guarantor') of the one PART IN FAVOUR OF the UPCL (hereinafter called the Purchaser of the other part

WHEREAS in accordance with the contract agreement dated the..... Day of201..... (Hereinafter called 'the said Contract') entered in to between the purchaser and M/s a company within the meaning of the companies act and having its registered office at..... (Hereinafter called 'the Contractor') the Contractor agrees to supply, erect, test & commission (strike off which is not applicable) to the Purchaser the..... As provided in the said Contract.

AND WHEREAS the payment terms under the Contract provide that in order to take 100% payment of the Contract value the contractor shall furnish to the purchaser a Bank Guarantee in the sum of 10% value of each consignment dispatched valid for.....

AND WHEREAS instead of furnishing separate guarantees as aforesaid the Contractor wishes to furnish one guarantee as sum of 10% value of the Contract valid for and reckoned from the date.....

Now This Deed Witnesses as Follows

1. In consideration of the promises the Guarantor hereby undertakes that the Contractor shall duly supply, erect, test and commission (strike off which is not applicable) the aforesaid material of the correct quality and strictly in accordance with the said contract failing which the guarantor shall pay to the Purchaser on demand such amount or amounts as the Guarantor may be called upon to pay to the maximum aggregate of Rs. being 10% of the Contract value.
2. The Guarantor shall pay to the Purchaser on demand the sum under clause 1 above without demur and without requiring the Purchaser to invoke any legal remedy that may be available to it to compel the guarantor to pay the same or to compel such performance by the Contractor. Provided that where the Guarantor considers the demand of the Purchaser unjustified, it shall nevertheless pay the same though under protest to the Purchaser and shall not with-hold payment on that account.
3. This guarantee shall come into force the date hereof and shall remain valid for 12 (Twelve) calendar months from the date of the Commissioning.... of the last consignment of goods dispatched which date dispatch according to the Contract is the day of if, however, the period of the Contract is for any reason extended thereby extending the said date and upon such extension, if the Contractor fails to furnish a fresh or renewed Bank Guarantee for the extended period, the Guarantor shall pay to the Purchaser the said sum of Rs..... Or such lesser sum as the Purchaser may demand.
4. The guarantee herein contained shall not be affected by any change in constitution of the Guarantor or of the Contractor.



5. Any account settled between the Contractor and the Purchaser shall be conclusive evidence against the Guarantor of the amount due and shall not be questioned by the Guarantor.
6. The neglect or forbearance of the Purchaser in enforcement of payment of any moneys the payment whereof is intended to be hereby secured or the giving of time by the Purchaser for the payment thereof shall in no way relieve the Guarantor of its liability under this deed.
7. The Purchaser and the Contractor will be at liberty to carry out any modifications in the said Contract during the time of the said contract and any extension thereof, notice of which modifications to the guarantor is hereby waived.
8. The expressions 'The Purchaser' and 'The Guarantor' and 'The Contractor' shall unless there be any thing repugnant to the subject or context include their respective successors and assigns.
9. Notwithstanding anything contained above, the liability of the Guarantor hereunder is restricted to the said sum of Rs..... And this guarantee shall expire on the day of 201 unless a claim under the guarantee is filled with the Guarantor within six months of such date, all claims shall lapse and the Guarantor shall be discharged from the guarantee.

IN WITNESS WHEREOF

For and on behalf of the Guarantor has signed this deed on the day and year first above written.

Witness:

1.

Signed by

(For and on behalf of Guarantor)

Annexure 5: Deviation Sheet

Bidders may provide the deviations in below sheet. **Unless such deviations are mentioned in this deviation sheet, the same will not be taken into consideration.**



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However, it is on sole discretion of UPCL to accept or reject the deviations. UPCL may ask the bidders to withdraw such deviations which are not being accepted by UPCL. If bidders don't withdraw the deviations, their financial bid will not be opened and the bids will be rejected summarily thereafter.

UPCL will not entertain any assumptions, the bidder has to clearly mention any deviations/assumptions here only.

Bid Clarifications – Terms and Conditions				
Sr. No.	Bid Reference (Section / Clause number)	Details of Clauses / Section deviation	Deviation proposed	Justification ()

Except aforesaid deviations, the entire order, if placed, shall be executed in accordance with specifications and any other conditions, variations/deviations etc. if found, elsewhere in this proposal should not be given any consideration while finalizing the bid.



Annexure 6: Compliance Matrix

Sr. No.	Item	Compliance (Yes/No)	Remarks/documents enclosed (if any)
1	We confirm that there is no deviation from the Technical & commercial terms & conditions as stipulated in the bid document		
2	We confirm that we agree for all General terms & conditions including payment terms as stipulated in the bid document		
3	We confirm that we have quoted rates for every item in schedule of rates		
4	We confirm to the eligibility criteria as mentioned in the bid document		
5	We confirm that there is no complaint/vigilance inquiry against the firm in any Govt. Department and we have not been black listed by any Govt. department.		
6	We confirm that we have enclosed all bid specific authorization in Technical bid		
7	We confirm that we have submitted all other documents required as per RFP.		
8	We confirm that we have submitted all required OEM MAF and OEM technical compliance required as per RFP for capex.		
9	We confirm that we have submitted all required technical compliance of quoted items in OPEX mode required as per RFP.		
10	We confirm that we have submitted unpriced BoQ as per Annexure-9		

(Signature of the bidder with SEAL)

Place: _____

Date: _____

Annexure - 7

Existing Hardware Details

Data Center Dehradun

S/N	Description	Qty	Unit	Equipment Status (working /non-working)	
				Working Qty (in Nos.)	Non- Working Qty (in Nos.)
1	IBM x3650 M2	37	Nos	24	13
2	IBM x3650 M3	6	Nos	3	3
3	IBM x3950 X5	34	Nos	19	15
4	IBM X3550 M2 7511740	1	Nos	1	0
5	CISCO UCSC-C240-M4S-V02	14	Nos	14	0
6	IBM POWER S822 8284 22A	2	Nos	2	0
7	IBM x346	2	Nos.	2	0
8	Wipro net power	2	Nos.	0	2
9	HP rp3440	2	Nos.	2	0
10	HP Storage hsv100	1	Nos.	0	1
11	Ultrim tape drive	1	Nos.	0	1
12	HP Compaq ProLiant ML350	1	Nos.	0	1
13	Sun Server Sun Fire X4150	1	Nos.	0	1
14	IBM SAN storage 128 TB Raw Capacity DS8884	1	Nos.	1	0
15	IBM Storage 64 TB Raw Capacity DS8300	1	Nos.	0	1
16	SAN Switch cisco MDS 9509 (9 Slot)	2	Nos.	2	0
17	IBM TS3500	1	Nos.	1	0
18	Juniper- SRX 3400	5	Nos.	3	2
19	Juniper-M320	3	Nos.	1	2
20	Juniper- SA 6500	2	Nos.	1	1
21	Radware App Director	4	Nos.	1	3
22	JUNIPER STRM 500	1	Nos.	0	1
23	JUNIPER IDP 8200	4	Nos.	0	4
24	JUNIPER NSM 3000	1	Nos.	0	1
25	Juniper Ex-8208	4	Nos.	4	0
26	Juniper Ex-3200	14	Nos.	8	6
27	CISCO-MCS-7800	2	Nos	0	2
28	UPS 40 KVA Eaton with isolation transformer	2	Nos	0	2
29	Battery bank (180 Nos* 2V * 200 AH)	1	Nos	0	1
30	Sophos XG 310 Firewall	2	Nos	2	0

31	Sophos XGS 3100 Firewall	1	Nos	1	0
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Disaster Recovery Center Haldwani

S/N	Description	Qty	Unit	Equipment Status (working /non-working)	
				Working Qty (in Nos.)	Non- Working Qty (in Nos.)
1	IBM 7915 X3650 M4	36	Nos	34	2
2	IBM MT 7143 X3850 x5	28	Nos	18	10
3	CISCO UCSC-C240-M4S-V02	4	Nos	4	0
4	IBM POWER S822 8284 22A	2	Nos	2	0
5	IBM System Storage DS8870	1	Nos	1	0
6	SAN Switch cisco MDS 9509 (9 Slot)	2	Nos	2	0
7	Tape library IBM TS3500	1	Nos	1	0
8	Juniper- SRX 3400	3	Nos	3	0
9	Juniper-M320	3	Nos	3	0
10	JUNIPER-J6350	2	Nos	0	2
11	Juniper Ex-8208	4	Nos	4	0
12	Juniper Ex-3200	3	Nos	3	0
13	STRM-500	1	Nos	0	1
14	IDP-8200	4	Nos	0	4
15	CISCO-MCS-7800	2	Nos	0	2
16	JUNIPER NSM-3000	1	Nos	0	1
17	UPS 160 KVA with isolation transformer Eaton 9390	2	Nos	2	0
18	Battery bank (240Nos. X 600 AH X 2V)	2	Nos	2	0
19	UPS 40 KVA Eaton with isolation transformer	2	Nos	0	2
20	Battery bank (180 Nos* 2V * 200 AH)	1	Nos	0	1

Existing Application details**Annexure-IV**

S/N	Applications Module Name	Services	Version	Product by	Application Status	Dr Center Haldwani	Operating System	Remarks
1	IBM Control Desk System (ITSRM) Database IBM DB2 Server	IBM Based Service	9.7	IBM	Single Instance	Same as DC	MS WIN Server 2008 R2 Enterprise SP1 64bit	In Use
2	IBM Control Desk System (ITSRM) Application Server	IBM Based Service	7.5.0.30	IBM	Single Instance	Same as DC	MS WIN Server 2008 R2 Enterprise SP1 64bit	In Use
3	Tivoli Netcool Performance Manager (TNPM) Application Server	IBM Based Service	1.4.5	IBM	Single Instance	Same as DC	RHEL 7	In Use
4	TIVOLI NETWORK MONITORING (ITNM) APP/DB	IBM Based Service	3.1.3.0	IBM	Single Instance	Same as DC	RHEL Server release 7.3	In Use
5	IBM TIVOLI MONITORING (ITM) Application Server	IBM Based Service	6.3.7	IBM	Single Instance	Same as DC	RHEL Server release 7.9	In Use
6	DSM (DATA SERVER MANAGER) For Monitoring DB2 Database	IBM Based Service		IBM	Single Instance	Same as DC	RHEL Server release 7.9 (Maipo)	In Use
7	IBM System Director Application For Hardware Alart	IBM Based Service	6.3	IBM	Single Instance	Same as DC	MS WIN Server 2008 R2 Enterprise SP1 64bit	In Use
8	IBM Tivoli Storage Manager For SAN	IBM Based Service	7.1.3	IBM	Active - Passive	Same as DC	MS WIN Server 2008 R2 Enterprise SP1 64bit	In Use
9	IBM Sanovi DRM	IBM Based Service		IBM	Single Instance	Same as DC	MS WIN Server 2008 R2	Not in used
10	IBM - BIGFIX Application Server	IBM Based Service	9.5	IBM	Single Instance	Not Installed	RHEL Server release 6.10	System Inventory
11	IBM - BIGFIX Database IBM DB2 Server	IBM Based Service	10.5	IBM	Single Instance	Not Installed	RHEL Server release 6.10	System Inventory

12	IBM System Storage Productivity Center (SSPC)	IBM Based Service		IBM	Single Instance	Same as DC	MS WIN Server 2008 R2 Enterprise SP1 64bit	Management Console old Storage / currently we are In Use new storage through DSCLI
13	IBM Tivoli Continuous Data Protection (CDP) Application Server	IBM Based Service		IBM	Single Instance	Same as DC	MS WIN Server 2008 R2 Enterprise SP1 64bit	In Use
14	Steel-Belted Radius (SBR) Application			Juniper	Single Instance	Same as DC	MS WIN Server 2008 R2 Enterprise SP1 64bit	In Use
15	STAXX Anomali (Integrated with cert-in for information exchange from Cert-in to UPCL)	Apache Services		Anomali	Single Instance	Not Installed	CentOS Linux release 7.9	In Use
16	HCL Lotus Domino Mail Application & Database	HCL Domino Based Service	11	HCL	Active - Active	Same as DC	RHEL Server Release 8.5	In Use
17	HCL Lotus Domino Mail Archival & HCL Mail Traveler Application	HCL Domino Based Service	11	HCL	Single Instance	Same as DC	Windows Server 2012	In Use
18	Active Directory Domain Controller (ADDS) & DNS	Windows Based	6.1.7601	Microsoft	Active - Active	Same as DC	MS WIN Server 2008 R2	In Use
19	External DNS for Web Site Hosting	RHEL Bind	9.11.26	RHEL	Active - Active	Not Installed	RHEL Server release 8.5	In Use
20	Microsoft Forefront Threat Management Gateway (Reverse Proxy (TMG) Application	Windows Based	7	Microsoft	Active - Active	Same as DC	MS WIN Server 2008 R2	In Use
21	Microsoft Windows Server Update Services (WSUS) Application Server & SVN for Source Code Updation	Windows Based /Visual SVN	10.0.14393 &4.1.2	Microsoft	Single Instance	Not Installed	MS WIN Server 2016	In Use
22	Public SFTP Server Windows based Services	Windows Based	1.0.13		Single Instance	Not Installed	MS WIN Server 2016	In Use

23	Trend Micro Apex One Antivirus & Apex Central (Agent Q. 1251)	Trend Micro Services	11602	Trend Micro	Single Instance	Same as DC	MS WIN Server 2012	In Use
24	Trend Micro InterScan Messaging Security Virtual Appliance (IMSVa) & InterScan Web Security Virtual Appliance (IWSVA)	Trend Micro Services	9.1 & 6.1	Trend Micro	Active - Passive	Same as DC	IWSVA release 6.5-SP2 and IMSVA Release 9.1	In Use
25	Sampark Application / MariaDB MariaDB Server Call Center	Asterisk, Java, Maria DB	Asterisk 11.13, Java 1.8, Maria DB 9	SAMPARK	Active - Passive	Not Installed	CentOS Linux release 7.9	In Use
26	UPCL-OLDKCC APP				Single Instance	Not Installed	MS WIN Server 2008	In Use
27	KCC Database SERVER	Oracle Based		Oracle	Single Instance	Not Installed	MS WIN Server 2008 R2	Not in used
28	FAS Report Server	Oracle Based		SSAS	Single Instance	Not Installed	MS WIN Server 2012 R2	In Use
29	KIOSK Machin Application Server			Qtel	Single Instance	Not Installed	MS WIN Server 2008 R2	Not in used
30	KIOSK Machin Database Server			Qtel	Single Instance	Not Installed	MS WIN Server 2008 R2	Not in used
31	UPCL Legacy Database Server	Oracle Based		Oracle	Single Instance	Not Installed		Not in used
32	UPCL Legacy Application Oracle application 10G	Oracle Based		Oracle	Single Instance	Not Installed		Not in used
33	LIFERAY (Single Sign on Portal) Database IBM DB2 Server	IBM DB2	9.7	IBM	Active - Active	Same as DC	RHEL Server release 5.5	In Use
34	LIFERAY (Single Sign on Portal) Application Server	Java, Jboss	6	Lifery	Active - Active	Same as DC	RHEL Server release 6.10	In Use
35	IBM Tivoli Directory Server (LDAP) Application & Database Server DB2	IBM Based Service	6.2	IBM	Active - Passive	Same as DC	RHEL Server release 5.11	In Use
36	IBM Tivoli Security Access Manager WebSEAL (TAM WEBSEAL)	IBM Based Service	6.1	IBM	Active - Active	Same as DC	RHEL Server release 5.5	In Use
37	IBM Tivoli Identity Manager (TIM) Application Server	IBM Based Service	5.1	IBM	Active - Active	Same as DC	RHEL Server release 5.5	In Use
38	Meter Data Management & Acquisition system Application Server	MDM Based Service	4	Infinite	Active - Active	Same as DC	MS WIN Server 2012 R2	In Use
39	MDM Scheduler Application Server	Windows Based		Infinite	Single Instance	Not Installed	MS WIN Server 2008	In Use
40	Secure Data Acquisition System Application Server	Secure Based	5.4.0.4	Secure Meters	Single Instance	Not Installed	MS WIN Server 2012 R2	In Use
41	Meter Data Management & Acquisition system Database MS SQL Server	SQL Based	2008 R2	Microsoft	Active - Passive	Same as DC	MS WIN Server 2012 R2	In Use

42	Genus MDAS KCC Meter Data Collection			Genus	Single Instance	Not Installed	MS WIN Server 2012 R2	In Use
43	Geographic Information System (ARGIS) License Manager Server	ArcGIS	10.6	ESRI	Single Instance	Not Installed	MS WIN Server 2012 R2	In Use
44	Geographic Information System (ARGIS) Dongle Licenses	ArcGIS	10.6	ESRI	Single Instance	Same as DC	MS WIN Server 2012 R2	In Use
45	Geographic Information System (ARGIS) Application	Java, Jboss, ArcGIS	10.6	ESRI	Active - Passive	Same as DC	MS WIN Server 2016	In Use
46	Geographic Information System (ARGIS) Database MS SQL Server	SQL Based	2017	Microsoft	Active - Passive	Same as DC	MS WIN Server 2012 R2	In Use
47	Integration (ESB) DATA access between GIS MDM CA Application	IBM Based Service	7.0.0.41	IBM	Active - Passive	Same as DC	RHEL Server release 5.11	In Use
48	SBM GPRS (ANALOGICAL) Spot Billing Application Server			Analogic	Single Instance	Same as DC	RHEL Server Release 6.10	In Use
49	Metering Billing Connection Service (MBC) / Consumer Master IBM DB2	DB2	11.1	IBM	Active - Passive	Same as DC	AIX 7.2	In Use
50	Consumer Relation Management (CRM) / Management Information Systems (MIS) / Mobile Billing Database IBM DB2 Server	DB2	11.1	IBM	Active - Passive	Same as DC	RHEL Server Release 6.10	In Use
51	NSC (New Service Connection) Application Server	Jboss	6	mPower	Active - Active	Same as DC	RHEL Server Release 6.10	In Use
52	CSC (Consumer Service Connection) Application Server	Jboss	6	mPower	Active - Active	Same as DC	RHEL Server Release 6.10	In Use
53	Metering Application Server	Jboss	6	mPower	Active - Active	Same as DC	RHEL Server Release 6.10	In Use
54	Billing Application Server	Jboss	6	mPower	Active - Active	Same as DC	RHEL Server Release 6.10	In Use
55	Collections Application Server	Jboss	6	mPower	Active - Active	Same as DC	RHEL Server Release 6.10	In Use
56	DND (Disconnection) Application Server	Jboss	6	mPower	Active - Active	Same as DC	RHEL Server Release 6.10	In Use
57	EAS (Energy Audit System) Application Server	Jboss	6	mPower	Active - Active	Same as DC	RHEL Server Release 6.10	In Use
58	MIS (Management Information System) Application Server	Jboss	6	mPower	Single Instance	Same as DC	RHEL Server Release 6.10	In Use
59	Report Module / EAS Scheduler Application Server	Jboss	6	mPower	Single Instance	Same as DC	RHEL Server Release 6.10	In Use
60	Mobile Application (Billing Application Server)	Jboss	Wild Fly 7	Infinite	Active - Active	Same as DC	RHEL Server release 8.7	In Use
61	FAM (Failed Activity Management Mobile Application Server)	Jboss	Wild Fly 7	Infinite	Active - Active	Same as DC	RHEL Server release 8.7	In Use

62	WSS APP01 (https://www.upcl.org/wss) (Web Self Service Consumer Portal)	Jboss	Wild Fly 7	Infinite	Active - Active	Same as DC	RHEL Server release 8.7	In Use
63	UPCL CMS Website (https://www.upcl.org)	IIS Based		Infinite	Single Instance	Not Installed	MS WIN Server 2016	In Use
64	ERP Integration for Data Migration to ERP		Wild Fly 7	Infinite	Single Instance	Not Installed	RHEL Server release 6.10	In Use
65	CASW-INTEGRATION For Development New Application	Eclipse		Infinite	Single Instance	Not Installed	RHEL Server release 7.9	In Use
66	SOURCE CODE Validation Application Server	Eclipse		Infinite	Single Instance	Not Installed	MS WIN Server 2016	In Use
67	WSS Payment Scheduler Application Server	Apache Tomcat	10	Infinite	Single Instance	Same as DC	RHEL Server release 8	In Use
68	WSS Web Portal Database Posgres SQL Server	SQL Based	8	Infinite	Single Instance	Same as DC	RHEL Server release 8	In Use
69	Mobile Bill Scheduler for Pragma ware Application Server	Jboss	6	Infinite	Single Instance	Not Installed	RHEL Server release 6.10	In Use
70	WSS Test, MIS ERP Integration Application Front API Server	Jboss	Wild Fly 7	Infinite	Single Instance	Not Installed	RHEL Server release 7.9	In Use
71	New Document-Management for All Application Server	Jboss	Wild Fly 7	Open KM	Single Instance	Not Installed	RHEL Release 8.6	In Use
72	Document Management / Collection, Billing Scheduler Application Server	Jboss	6	Alfresco	Single Instance	Same as DC	RHEL Server release 5.11	In Use
73	Document Management /SMS, CSC, NSC Scheduler Application Server	Jboss	6	mPower	Single Instance	Same as DC	RHEL Server release 5.11	In Use
74	Cisco Unity Connection (CUC) Application Server		6	Cisco	Single Instance	Same as DC	RHEL-6Server-6.6.0.2.el6.x86_64	In Use
75	Cisco Unified Communications Manager (CUCM) APP		6	Cisco	Single Instance	Same as DC	RHEL-6Server-6.6.0.2.el6.x86_64	In Use

Integration Details

Integration	Service
AMR Integration	To Post Meter Data
Umang Integration	Bill History
	Register Complaints
	Complaints History
	Connection Details
	Payment History
	User Login
	User Registration
	Bill Details
	Bill Download
CSC Payment Posting	CSC bill Payment Status
	CSC bill Details Fetch
	CSC bill Payment Posting/Reposting
Single Window	NSC LT Registration more than 25 KW
	NSC HT Registration Up to 200KVA
	NSC HT Registration Above 200KVA
	LT Temp Registration
	HT Temp Registration
	HT Load Enhancement
	Get Draft Details
	Update Single window connection status API
Apuni Sarkar Integration	NSC Domestic LT Registration
	NSC Status Update
	Complaint Registration
	Complaint Status API
Stamp & Revenue Department	Consumer Connection Details with current ledger balance API
Dehradun Smart City	Bill Details API
	Bill Download API
Urja Mitra	Feeder Outage update to Urja Mitra from RTDAS
SMS Integration PWC	SMS Integration API
PM Kusum SMS Integration	ERP HINDI/Unicode SMS Integration API
Urban Feeder Data	Customer care data API
	Feeder ATC loss data
	Mothly Feeder data
	Parivartak Login API
	Parivartak File/Document Upload API
	Parivartak Division/Subdivision Details API
	Parivartak Dtr Details API
	Parivartak Post Dtr Details API
	Parivartak Substation Details API
	Parivartak Post Asset Details API
	Parivartak Feeder Details API
	Parivartak Dtr Count API
	Parivartak Capacity Details API

UPCL Mobile (Self-service) APP Integration	-
POS HDFC Integration	POS Bill Details Fetch API
	POS Bill Payment Posting API
	POS Bill Payment Status API
BBPS Payment Integration HDFC	BBPS Bill Details Fetch API
	BBPS Bill Payment Posting API
BBPS Payment Integration AXIS	BBPS Bill Details Fetch API
	BBPS Bill Payment Posting API
HDFC RTGS/NEFT Bill payment Integration	Bill Payment Posting API
HDFC RTGS/NEFT ASD payment Integration	ASD Payment Posting API
Prepaid Meter Integration with Secure	-
Razor Pay Bill Payment Integration	-
Razor Pay NSC Payment Integration	-
Razor Pay ASD Payment Integration	-
MISC Integration	-
CCAvenue Bill Payment Integration	-
CCAvenue NSC Payment Integration	-
CCAvenue ASD Payment Integration	-
MISC Integration	-
ERP Material Integration	ERP Material Data save API
Razor pay HDFC Payment Integration	-
Apuni Sarkar Complaints	All Complaints (CSC+NSC)
	-
DataLake Integrations	Mode of Payment being used (Monthly)
	Unit Consumption location/division wise
	New Connection Details load wise
	New Connection Details location wise
	Connection established under difference Govt. schemes
CSC Integration (SCADA)	Feeder Status Data (SCADA UPCL)
CSC Integration (RTDAS)	Feeder Status Data (RTDAS UPCL)

Note: - Utmost care has been taken to prepare the document. However, there may be integration/applications which may not be listed above but are integral part of application stack. It is the bidder's responsibility to do the integrations with present/upcoming application during contract period.

1. RISC Server:

S No.	Classification	Minimum Requirements	Compliances (Yes / No)
1	Form factor/Node Type	Server should be 19-inch-wide Rack Mountable with rail kit-adjustable depth	
2	Processor Type	64 Bit, RISC Processor	
3	Processor Speed	Minimum 3.0 GHz or higher	
4	No of Processor Cores	Server should be proposed with at least 1 (One) Processors each with minimum 12 Cores with minimum 3.0 GHz Clock speed or higher. And server should be upgradable to 24 Cores	
5	Level 2 Cache Level 3 Cache	2 MB cache per Core or higher 8 MB cache per Core higher	
6	Threads	Must have 8 threads or more per CPU core	
7	Memory (RAM)	Minimum 1TB memory shall be provided per processor and should be scalable to 4 TB of memory.	
8	System Memory	Memory Bandwidth support of DDR 5 or higher	
9	Internal Hard Disk	Should support Internal NVMe Drives.	
10	DVD Drive	Bidder shall provide 1 separately connected DVD RAM drive (Internal/External).	
11	Network Card (Ethernet)	At least 2 (Two) units network card each with dual port 10 Gb adapter with SFP+ SR.	
12	Fiber Channel Adapter	At least 2 (Two) units of 2 Port Fiber Channel Adapter (16/32 Gbps) to connect the External SAN Storage/Switch.	
13	Power Supply & Cooling Fan	1+1 Redundant Hot Swap-plug Power Supply and Cooling fan/subsystems.	
14	Operating System	Server should be provided with AIX Operating System for entire machine.	
		Additionally, should be provided compiler with license at UNIX platforms, if required	
		Virtualization / Partitioning / Micro Partitioning software related licenses should be provided.	
		Should have GUI based management console	

15	Rail System	Server should be rack mountable and installation rails needs to be supplied with the server	
16	Systems Management	Resource management software and related software need to be provided.	
17	Warranty	3 Years onsite 24X7 warranty including Operating system and virtualization software	

2. Xeon Server:

S.No	Features	Minimum Requirements	Compliance (Yes/No)
1	Form Factor	Min 1U Rack Mounted	
2	Configured CPU	Supports atleast two Latest Intel® Xeon® Scalable 5 th Generation processors or higher, (To be populated with dual processor each having min 32 Cores, min 2 GHz clock speed, min 160MB Cache) or equivalent of higher AMD processor	
3	Memory slots	Should support 32 DDR5 DIMM slots RDIMMS & LR DIMMS supporting speeds up to min 4400MT/s and scalable up to 4TB of Memory or higher In case of AMD processor is proposed than the server should support minimum 24 DIMM slots supporting speeds up to min 4400MT/s and scalable up to 4TB of Memory or higher	
4	Memory configured	Server should be configured with minimum 512GB 4800 Mhz memory or higher	
5	Capacity Drive support	Server should support upto 10 SFF SAS/SATA hard drives (HDDs) or SAS/SATA/NVMe solid state drives (SSDs).	
6	Boot Optimised SSD's	Each Server should be configured with 2 * 480GB or higher using latest M.2 SSD or better drives.	
7	I/O slots	Supports Atleast 3 * PCIe Slots	
8	FC HBA	Server should be configured with One Dual port 32G FC HBA card	
9	Ethernet ports	Configured with Min 1*Quad Port 10/25G Ethernet Ports. Populated with 4*10G SFP Adapter for server uplink connectivity to Network/TOR switch Minimum 2 X 1000/100 Mbps ports	
10	Certification and Compliance	Microsoft Windows Server, Hyper-V, VMWare, Red Hat Enterprise Linux (RHEL), SUSE Linux Enterprise Server (SLES), Oracle	

11	Virtualization software	<p>The server should be provided with virtualization software license for entire server. Supplied virtualization software shall allow UPCL to create unlimited virtual machine of desired cores with no restriction on cores and resource allocation.</p> <p>The proposed virtualization solution should have capabilities to run containers alongside Virtual Machine , provide VM details including - Labels, annotations, Configured OS, Template used, if any, Configured boot order, Associated workload profile, Failover, Additional details about scheduling, Node selector, tolerations, (anti) affinity rules, Services configured for the VM, provide action menu to quick access to common VM tasks - i) Start/stop/restart ii)Live migration iii)Clone iv)Edit application group, labels, and annotations v)Delete with ability to run and manage linux and windows virtual machine workloads.</p>	
12	Power Supply	Platinum rated redundant Power Supply	
13	Power & temperature	Integrated diagnostics and Power monitoring and reporting, Dynamic Power capping.	
14	Configuration & Management	<ul style="list-style-type: none"> * System should support multiple management interface like Web UI, CLI and XML API. Management solution should be able to manage different form factor hardware and provide single console. * Real-time out-of-band hardware performance monitoring & alerting. * Remote Power On, Off and reset from Web UI, XML API and KVM. * The management tool should be able to provide global resource pooling and policy management to enable policy based automation and capacity planning * Zero-touch repository manager and self-updating firmware system, Automated hardware configuration and Operating System deployment to multiple servers * Virtual IO management / stateless computing * The server should support industry standard management protocols like IPMI v2 and 	

	<p>SNMP v3 and Redfish v1.01</p> <ul style="list-style-type: none">* Console record and play, Virtual Media, LDAP & HTML5 remote control.* Server management software should provide capability to view health , inventory for third-party compute, network, storage, integrated systems, virtualization, and containers.* The management software should participate in server provisioning, device discovery, inventory, diagnostics, monitoring, fault detection, auditing, and statistics collection.* Server management system should provide an alert in case the system is not part of OEM Hardware Compatibility list & should provide anti counterfeit.* The proposed management solution should provide proactive security & software advisory alerts and should outline the fixes required to address the issues.* The proposed management solution should analyze current configurations & identify potential issues due to driver & firmware incompatibility* The proposed management solution should provide policy control to prevent drift of server configurations.* The proposed solution should have customizable dashboard to show overall faults / health / inventory for all managed infrastructure. With option to create unique dashboards for individual users. The user should have flexibility to select names for dashboards and widgets (ex:- health, utilization etc.)	
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16	Server Node Security	<p>Should have a cyber resilient architecture for a hardened server design for protection, detection & recovery from cyber attacks</p> <p>Should protect against firmware which executes before the OS boots</p> <ul style="list-style-type: none"> * Hardware based Root of Trust * Signed firmware updates * Secure default passwords * Secure alerting * Automatic BIOS recovery * Rapid OS recovery * Chassis Intrusion Detection * System Lockdown * System Drift Detection * Configuration upgrades should be only with cryptographically signed firmware and software 	
17	IPV 6 compliance	The Hardware should be IPV 6 Compliant ready	
18	Warranty	3 Years comprehensive 24 X 7 warranty should be provided for server and 3 years support for virtualization software	
19	RAID Controller and Disk	<p>12Gbps SAS RAID controller with 4GB Cache supporting RAID 0,1, 5, 6, 10, 50, 60 supporting capacity drives configured in system.</p> <p>Server should be supplied with Minimum 4 X 1.8 TB SAS Hard Disk</p>	

3. Backup Server

Sr No.	Minimum Specifications / Requirements	Compliance (Y/N)
1	Form Factor: Max. 2U Rack Mounted	
2	Configured CPU: Two Intel Xeon 16 Cores 2.4 GHz or higher clock speed, or equivalent or better AMD processor.	
3	Memory configured: 64 GB 4800 Mhz DDR4 / DDR5 or better Memory, scalable up to 512 GB, should be offered in each node. Memory should be offered in a balanced configuration so that maximum memory channels can be utilized.	
4	Boot Drive: Server should support 2.5" SAS/ NVMe SSD Drive. System should be configured with 2 * 3.8 TB SSD for Boot and 7 * 15.3 TB SSD Drives or higher capacity for storage.	

5	RAID/HBA Controller: 12Gbps SAS RAID controller with 4GB Cache supporting RAID 0,1, 5, 6,10, 50, 60 supporting capacity drives configured in system.	
6	I/O slots: At least 6 * PCIe Gen3 Slots.	
7	FC HBA: 2*dual port 32G FC	
8	Ethernet Ports: Min 2 x 10G BaseT and 2 x Dual Port 10/25G SFP+ Ethernet Ports with cables. 2 X 100/1000 Mbps Ethernet port onboard or externally should be provided.	
9	Certification and Compliance: Microsoft Windows Server, Hyper-V, VMWare, Red Hat Enterprise Linux (RHEL), SUSE Linux Enterprise Server (SLES), OEL, Cent OS	
10	Power Supply: Redundant Power Supply	
11	Power & Temperature: Integrated diagnostics, power monitoring and reporting, Dynamic Power capping.	
12	Operating System: Operating System for backup server needs to provided along with server	
13	Warranty: 3 Years comprehensive 24 X 7 warranty should be provided for the server	

4. Storage

S No.	Feature	Minimum Requirements	Compliance (Yes / No)
1	Storage Controller	The All Flash Storage system should be a SAN storage supporting block protocols like iSCSI and FC Supplied with 2 controllers on active/active mode and scalable to 8 controllers in the same cluster in active-active configuration. Shall support automated I/O path failover. The controller's / Storage nodes should be upgradable seamlessly, without any disruptions / downtime to production workflow for performance, capacity enhancement and software / firmware upgrades.	
2	Cache Required	The Storage system should have minimum 512 GB Cache. Cache must be protected against controller or power failures. (Cache of 512 GB means sum of Cache memory supported by all	

		<p>the storage controllers in the storage. Memory of any other device will not be considered to calculate cache of the storage.</p> <p>Cache should be mirrored and battery-backed-up /disk-de staged, to provide protection of data for 72 hours or more.</p> <p>The system should support persistent Cache so that in event of failure of controller, system should not go in write through cache mode.</p>	
3	Drive Support	The All Flash array system must support a 1.92 TB, 3.84 TB, 7.68 TB and 15.36 TB, 12 Gbps SAS / NVMe SSDs. Sufficient No. of (old spare disk not to be installed) of each type and capacity to be provided.	
4	Protocols	The storage should be a block storage Configurable with FC, iSCSI protocols for use with different applications and all protocols should support the maximum capacity offered by the storage system. Any hardware/software required for this functionality shall be supplied along with it in No Single Point of Failure mode.	
5	RAID Configuration	Should support RAID 6 with the usable capacity of minimum 150 TB	
6	High Availability	<p>The storage system must be configured in No-Single-Point-of-Failure and should offer online firmware upgrades.</p> <p>Storage solution should offer separate 1 hot spare disk for every 20 disks of SSD.</p>	
7	DR Replication	Storage should be able to replicate data from primary storage natively without the use of any additional software.	
8	Backend Connectivity	<p>The proposed All flash storage system should have minimum 4x12Gbps SAS ports for disk connectivity.</p> <p>Offered storage shall be supplied with minimum two additional 10Gbps IP ports for storage-based replication on Storage array.</p>	
9	Storage Capacity	Storage system should be configured with 150 TB (usable) capacity. The storage should support in-line deduplication/deduplication and in-line compression/compression for entire capacity of storage.	
10	Front-End	The proposed All flash storage system should have minimum 4x40GigE Ports or 8x10GigE ports and 8x32Gbps FC or 8x16Gbps FC ports for host connectivity.	

11	Rack Mountable	The All Flash storage should be supplied with rack and rack mount kit. All the necessary patch cords (Ethernet and Fiber) shall be provided and installed by the Successful Bidder.	
12	Storage Functionality	Proposed storage should provide block level data de-duplication and compression. The storage shall have the ability to expand LUNS/Volumes on the storage online and instantly. The storage shall have the ability to create logical volumes without physical capacity being available and allow over-provisioning of the capacity. The license required for the same shall be supplied for the maximum supported capacity of the offered storage model. The storage must support hardware based (host independent) data replication to a remote site and bi-directional data copy. Storage shall support Error detection and fault isolation. The storage must be certified to run leading virtualization software OEM like Hyper-V, VMware, RHEL etc.	
13	Point-in-times Images	The storage should be configured with Quality of Service feature for IOPs and Throughput. All Storage system should be configured with remote replication for both file and block. The proposed replication solution should have encryption for Synchronous / Asynchronous replication and should also offer bandwidth optimization.	
14	Management Software	Must include single management, easy to use GUI based and web enabled storage Manager software, to centrally manage all Storage subsystems, Multi-path (Load Balancing & Fail over), LUN masking and should Support RAID migration on to the vacant space available Storage subsystem shall be supplied with Thin Provisioning, Snapshot, Clone, Performance Monitoring, Online Raid Migration, Online Volume conversion (thin to thin compressed, thin to thin de- dup etc.), block services and Quality of services on day 1 for the maximum supported capacity of array. The storage should have the requisite licenses to create point-in-time snapshots. The storage should support minimum 250 snapshots per volume/LUN. The license proposed should be for the complete supported capacity of the	

		Storage for both block and file. The system should have the requisite licenses for instant creation of clones of active data, with near zero impact for both block and file.	
15	Licenses	All the required software not limited to firmware, OS, management software, capacity license shall be supplied with relevant licenses.	
16	Remote Support & Diagnostics	. Call Home . Performance and Capacity reports	
17	OS & Database Support	Support for industry-leading Operating System platforms including Linux & its variants, Microsoft Windows, HP-UX, SUN Solaris, IBMAIX, etc. Any Multi pathing software required for the solution must be supplied for unlimited host connectivity Storage shall support all kinds of database such as oracle, /MSSQL/MY SQL/ DB2/Informix/Sybase/ Exchange environment and archival. Storage shall support virtualization platform from VMware, Hypervisor etc	
18	IOPS	Proposed storage array should support a minimum of 2 Lakhs IOPS.	
19	Scalability	The proposed storage array should be scalable up to 2PB (Peta Bytes).	
20	Warranty & Support	Bidder need to ensure back to back warranty from the OEM for the entire rental duration.	
21	Multi Tenancy	The proposed storage should support multi tenancy and provide a secure administrative segregation of the underlying storage resources, hosts, users and Application data.	
22	Product Life	The proposed hardware should support validity available from OEM for next 5 years from the date of installation, along with the EOL certificate.	

5. Backup software:

S No.	Minimum Requirements	Compliance (Yes/No)
1	The Proposed backup should be available on various OS platforms such as Windows, Linux and Unix platforms and be capable of supporting SAN based backup/restore from various platforms including Unix, Linux and Windows. It should be able to integrate with virtualization software (such as VMware, Hyper-V and Nutanix Acropolis) and should be	

	able to take both agent based and agent-less backup of virtual servers.	
2	The proposed solution should be able to backup end user's desktop & laptops	
3	Proposed solution should support Central web based Management Console that simplifies the process of managing and reporting on multiple backup servers & Desktops in distributed across an environment.	
4	The proposed backup solution should be present in India for more than 12 years.	
5	The proposed backup solution should be capable of taking backup of SAN environment as well as LAN based backup.	
6	The proposed solution should have inbuilt asynchronous server based replication allowing replication of data to DR sites without any additional cost. It should have data rewind capability and should also be able to replicate across the hypervisors (for like VMware to Hyper-V and vice-versa.	
7	Proposed backup software should be capable of Bare metal recovery option for instant recovery of servers & desktops / laptops.	
8	Granular restoration along with BMR option for quick recovery of deleted files. For DB & Mail applications expected granular restoration at application aware manner	
9	The proposed backup solution should have in-built media management and supports cross-platform device and media sharing in SAN environment. It provides centralized scratch pool thus ensuring backup never fails for media	
10	The proposed solution should provide variable length data deduplication (minimum 4K blocks for better deduplication ratio) at global and source side along with compression. It should be able to throttle network bandwidth for effective utilization of network resources.	
11	Backup software should be able to rebuild the Backup / database catalog from tapes in the event of catalog loss/corruption	
12	The proposed backup solution shall offer Open File support for Windows, Linux based Servers.	
13	Backup Clients should be updated automatically using the client push or/and update feature and install backup agent in the laptop, desktop and server from a single console.	

14	The proposed backup solution should support online backup solutions for different types of databases such as Oracle, MS SQL, Sybase, SQL, HANA, Informix etc. on various OS. A combination of backup solution is acceptable	
15	The Proposed backup solution should have been implemented at least 10 government organizations.	
16	Proposed solution should support universal recovery to restore from P2P, P2V and V2V without having to wait to extract the full backup to production storage	
17	Proposed solution should have capability to take consistent snapshot of all Microsoft Application i.e. MSSQL, Exchange, Oracle and SharePoint	
18	Proposed solution should provide granular email recovery (single mailbox, single mail) to an outlook client or pst & file-level recovery for Exchange and SharePoint without additional cost.	
19	Proposed solution should be licensed in processor and capacity based.	
20	The software should be able to use USB drives/Network file share/block storage / and native file server volumes for keeping the backup copies	
21	The software should be able to create Standby server on virtualized systems (VMWare/Hyper-V Server/EC2) and should monitor the heartbeat of the source to enable recovery during production server failure	
22	The software must allows administrators to back up a server as frequently as every 15 minutes. The software must allow Administrator to backup of servers , desktop and laptop from a single console .	
23	The software should be able to generate logs & report e.g. de-duplication, Data growth analysis report, Compute utilization report during backup etc.	
24	The software should support clustered environment of VMWare/Hyper-V at the hypervisor level	
25	The proposed backup solution should have Global dashboard with Infrastructure Visualization capability to launch Dashboard Reports on a backup node	
26	The proposed backup software should have Integrated block-level replication capability to replicate the backup sets from backup server at one site to backup server on another site. In case of failures, it should be able to resume the replication from point of failure.	
27	The proposed solution should have the capability to take Backup of Network Shares and UNC path.	
28	The proposed solution should be able to perform cross platform Instant VM Recovery. The solution should be	

	capable of Instantly restoring VM running on ESX on Hyper V and vice versa.	
29	The proposed solution should provide assured recovery mechanism for testing backup integrity.	
30	The proposed backup and replication solution should be capable of taking backup from Hardware snapshots (e.g. NetApp, Nimble, HP-3PAR).	
31	The proposed software should provide inbuilt capability to integrate with cloud from 3-2-1 perspective and should also allow to perform Instant VM Recovery/ Virtual Stand by operation on on-premise infrastructure and cloud.	
32	The proposed software should be able to create Standby server on virtualized systems (VMWare/HyperV/EC2) and should monitor the heartbeat of the source to enable recovery during production server failure	
33	The proposed solution should provide D2D2T,D2T and D2D2C capabilities.	
34	Proposed solution should support universal recovery to restore from P2P, P2V, V2V without having to wait to extract the full backup to production storage	
35	The proposed Backup and replication software should provide role based access control for security and audit purpose.	
36	The proposed software should provide capability of full system replication and migration of Windows and Linux based servers and should provide assured recovery mechanism for non-disruptive DR testing.	
37	The proposed backup and replication software should be able to automatically switchover/failover the VMs from production datacentre to DR datacentre in case of failures/disaster and vice-versa.	
38	The proposed backup solution should have inbuilt asynchronous server based replication. The replication software should have data rewind capability and should be vendor agnostic.	
39	The proposed solution should provide push button switchover/failover capability.	
40	The replication software should provide capability of full system replication and migration of Windows based servers quick and easy and should provide assured recovery mechanism for non-disruptive DR testing.	
41	The proposed backup solution should offer a 15 minute RPO and 120 minutes RTO.	
42	The proposed backup appliance should offer 4 hours on-site support.	

43	The replication software should provide kernel based virtual machine replication for all leading Linux flavours.	
44	The backups must be replicated to a remote DR site in near real time. When a backup site renders unusable due to any reason it must be possible to recover all the data from its remote DR site. Management and administration of the cross-site replication functions shall all be done through the management software.	
45	The backup software shall be capable of replication from site1 to site2 or vice-versa for the backups done in each site in the backup file level and not in the storage level.	

6. Identity and Access Management Software for UPCL billing Solution

S No.	Minimum Requirements	Compliance (Yes / No)
1	Solution should provide the ability to make real-time course-grained authorization decisions such as a whether to grant access to an application	
2	Solution should allow access and authorization permission criteria to be linked to role definitions rather than to individual user accounts so that these decisions are driven by a user's membership of a role	
3	Solution should respond to requests from applications for authorization decisions, based on user role membership and other user properties	
5	Solution should be sized for 2500 Users	
6	Solution should support the implementation of Role Based Access Controls (RBAC) for controlling access to functions within an application	
7	Solution should detect orphaned accounts (accounts that have no associated record in a specified authoritative data source) and perform an action such as —suspend or —notify	
8	Solution should provide the ability to a user who has forgotten his/her login ID to trigger an automated resending of it to the email address associated with their user account	
9	Solution should provide the ability for a user to self-reset their password	
10	Solution should enforce password policies during user self-service password resets	
11	Solution should be triggered to synchronize data in the solution identity data repository by an event in another authoritative data source.	

12	Solution should generate a unique user ID – a unique and permanent identifier to unambiguously identify every user in the solution identity data repository	
13	Solution should perform audit and logging capabilities	
14	Solution should provide operational and user activity reports provided out of the box	
15	Solution should allow for the automatic archival of audit logs after a given period of time.	
16	Solution should provide a workflow system to accept change requests from users directly, request and track authorization, and provision access once requests are submitted and approved.	
17	Solution should allow users can reset or change forgotten passwords and access or unlock locked accounts	
18	Solution should enforce password strength using password policy	
19	Solution should support SMS / email support which allows one-time tokens / OTP via text message or email for user verification, activation and new passwords.	
20	The system shall provide comprehensive reporting such as —who has access to what, —who approved what, —orphaned accounts found and these reports should be available online or can be exported for distribution.	
21	Proposed solution should be capable of supporting 100% user capacity at any given point of time.	
22	Proposed solution is required for internal Consumption and not to provide any services to citizens / Civilians. OEM License should be inline.	

7. Monitoring software for DC

Sr No.	Minimum Specifications / Requirements	Compliance (Y/N)
1	License should be device based.	
2	Must be licensed for Management & Monitoring at least 500 nos. of devices and should support scalability without installing additional software.	
3	Integrated Performance Information, from single interface with support for secure Web-based access using SSL 128bit - 256bit encryption ciphers.	
Should provide the following minimum features:		
4	Mapping Features: Automated map creation, Customizable topology maps, Multi-level topology views and on-demand map creation with lat long GIS plotting in-built on the tool.	

5	<p>General Monitoring Features: Able to support instant diagnosis of the node status through Ping, SNMP Walk / Mib Walker, Telnet, SSH, MAC Filtering, Trace route and Remote Desktop, WMI application monitoring, Blackout period to suspend specific actions during the scheduled period of time, Configurable Alert and Notification escalation policies, Mobile Interface, Configurable role-based management with granular control over the user roles, groups roles, user/group attributes, Scheduling of automatic on-demand custom and recurring reports, Support of wild card search with regular expression matching and filtering with attributes for device configuration, inventory or other device specific information</p>	
<p>IT Operations Monitoring Features</p>		
6	<p>Discovery: Network Device Discovery via SNMP v1,v2-v3, ICMP & CIDR, Automatic Server Services discovery via WMI or Agent, Discovery by CSV file import, Scheduled Discovery, Layer2 Discovery, VLAN Discovery, MAC Discovery, ARP Discovery, MPLS Discovery, VRF Discovery, VPN Discovery, IPv4/IPv6 address range, SNMP Smart scan, hosts file, Scheduled discovery scans & Web-based discovery</p>	
7	<p>Capability: SNMP v1-v2-v3 Support, Network Discovery Rule Engine, Discovery Reports, Automatic Layer 2/ Layer3 Network Maps</p>	
8	<p>Features: Category-based Infrastructure Views, Custom Infrastructure View, Business Views for custom grouping of devices, Network Traffic Maps, Maps with flow-based data, Templates based device classification and monitoring, Web-based Map-Maker.</p>	
9	<p>Monitoring: ICMP Ping Check, TCP Based Status Polling (for Non ICMP Environment), Schedule downtime, Service Level Management Dashboards, Support for adding custom device types, Real-time Perf. and Traffic Monitoring via SNMP, Management Console with reporting tool, Web Or Windows based management console. The portal should support dynamic gadgets and widgets for data representation with live animations and live data representation.</p>	

10	<p>Server & Applications Monitoring: Hardware Health Monitoring such as CPU, Memory and Disk Utilization & other performance, Metrics via SNMP, WMI & CLI etc. Service Monitoring for Windows, Linux and Unix. Process Monitoring using SNMP, WMI & Telnet or SSH. Other Monitoring: File/ Folder monitoring, Hypervisor Monitoring, Virtual Machine Monitoring, Script Monitoring, URL Monitoring, Custom SNMP/WMI Monitoring, CLI Based Perf. Monitoring, Options to include Additional fields for the devices for e.g.Physical location of the box, Application Monitoring etc.</p>	
11	<p>Router / WAN / Bandwidth Monitoring: Interfaces Monitoring for traffic, errors & discards, Ability to specify alias name for Interfaces, CPU And Memory Utilization for Routers, Rediscover option for finding the interfaces newly added,deleted, modified etc, Configurable Transmit And Receive Bandwidth, Ability to Manage/Unmanage Interfaces from GUI, Hop-wise WAN link visibility, VoIP/ NetFlow Monitoring, Wireless LAN Controller Monitoring, NBAR support for analyzing dynamic port application traffic,CBQoS support to analyze pre/ post policy packet drops, Bandwidth Billing, Traffic shaping, Anomaly detection etc.</p>	
12	<p>Configuration Management: Network Configuration Management, Schedule automatic configuration backups, Push and revert configurations across multiple devices, Approval-based configuration changes, monitor configuration changes and receive alerts, Routine check on compliance for network devices</p>	
13	<p>IP Address & Switch Port Management:IP Address management, Switch Port Monitoring, Manage/Unmanage Switch Ports, identify rogue/trusted devices, Ability to specify alias name for switch ports, Port traffic Utilization, Alerts during abnormal broadcast, Rediscovery of newly added/deleted ports, Ability to detect and disable broadcasting ports</p>	
14	<p>Firewall Log Management: Security audit regulation, Firewall policy management</p>	
15	<p>End-User Centric Monitoring: User-wise app/bandwidth usage, Snapshot page for end-user</p>	

16	<p>Fault Management and Alerting: Event-Alarm Correlation, Color Coded Alarms, Web Alarms, Acknowledge Alarms, Alarm Escalation, Alarm Suppression, Alerts through RSS feeds, SMS/Email based alerts, Restarting the Services and Running self- curing patches on the event of an Alert, Alerts based on Windows Event Logs, Time based action or alert triggering, Alert Center for centralized alerts/notifications escalation management, Configurable alert thresholds.</p> <p>Other Capabilities: Highly customizable dashboards, IT Workflow Automation, SNMP Trap Processing and Forwarding, Operator Notes, Syslogs Monitoring,</p> <p>Actions: Log-to-Text, Log-to-Event Log, SNMP Set, Real-time Browser and Syslog Viewer etc.</p> <p>Troubleshooting Tools: ICMP Ping, Traceroute, Switch Port Mapper</p> <p>Remote Control Tools: Telnet/ SSH session, Terminal Session for Windows Servers, Web- Console access for Network devices.</p> <p>Able to send alert happened via E-mail, Direct SMS, Execute Batch file, SNMP Trap, XML notification, Pop-up window and Audio alert etc.</p>	
17	<p>Reporting: SLA Dashboards for Servers, Routers, Switches etc.</p> <p>All Servers Availability / Outage Report, Health Report for Servers, Routers, Switches etc.</p> <p>TopN Servers by CPU, Memory and Disk, Top N Servers by Interface traffic report, Server access report through firewall logs.</p> <p>TopN report for routers by CPU and Memory Utilization, Interface Traffic/Utilization/Error Reports, Peak time reports (Eg. 8:00am to 8:00pm), WAN Link availability/ RTT report, Forensic reports, Bandwidth capacity planning reports, Traffic reports, User audit reports, Schedule Reports, Custom Reports, Export Reports (PDF,XLS, CSV formats), Email/Print report directly to printer.</p>	
18	<p>User Access and Configuration Management: Provision to Create Separate User Accounts, Role-based user management, Quick Configuration Wizard (To perform configuration tasks on multiple devices), List View for quickly pushing configurations, Fully functional web client, Ability to run as windows service, LDAP based authentication</p>	
19	<p>Integrations, Other Features and Support: API based integration with the existing IT management ecosystem, Help Desk Integration, Failover – Hot standby engine, REST APIs, App for iOS and Android devices</p>	
20	<p>General Information: Integrations between network management modules, Support for distributed network</p>	

Part B	Out of box Support for following	
21	ERP: SAP CCMS, SAP Server etc.	
22	Mail Servers: POP3 POP3S IMAP IMAPS SMTP SMTPS etc.	
23	Converged Infrastructure	
24	Servers OS: Unix, Windows, Linux etc.	
25	Database Servers: DB2, MS SQL, MySQL, Oracle, PostgreSQL, SAP HANA, Hadoop, NoSQL, MongoDB, RRD, etc.	
26	Services: Active Directory, DNS Monitor, FTP/SFTP Server, LDAP Server, Network Policy Server (Radius Server), Ping Monitor, Ping Monitor (EUM), Service Monitoring, SNMP/Network Devices, Telnet etc.	
27	Web Server/Services: Real Browser Monitoring with Web User Experience, Secure Apache Server, HTTP(s) URLs, HTTP(s) URL Sequence, IIS Server, SSL Certificate Monitor, Web Servers, Web Services, Website Content Monitor etc.	
28	Should have Support & Development center in India (Locally) for Easy, Quick and Faster response time for Bug-Fixes, General Upgrades, Enhancement Upgrades, Major Upgrades and for local chat support.	
29	The proposed software should have support from the OEM for the entire rental period.	

8. Load Balancer/Web Application Firewall

Sr No.	Minimum Specifications / Requirements	Compliance (Y/N)
1	The proposed OEM should be Parent Technology OEM (Should NOT be White abled or Co-branding or 3rd Party Technology or Open Source or Reseller Agreement).	
2	The proposed appliance should be a dedicated appliance, it should not be part of any Firewall or UTM.	
3	Traffic Ports: 2 x 10 GE SFP+ and 8 x 1G RJ45 (Break-Out should not be used) L7 Throughput: 3 Gbps and scalable upto 12 Gbps OR, L4 Throughput: 5 Gbps and scalable upto 20 Gbps	

	<p>Layer 7 requests per second: 850,000 RSA CPS(2K Key): 20,000 ECC CPS (EC-P256): 12,000 with TLS1.3 Support Concurrent Connections: 50 Million * Data should be publically available</p>	
4	<p>The solution must be able to protect both HTTP Web applications, SSL (HTTPS) web applications & Should support HTTP/2</p>	
5	<p>The solution must be able to decrypt SSL web traffic between clients and web servers</p>	
6	<p>The proposed appliance should support the below metrics: — Minimum Misses, — Hash, — Persistent Hash, — Tunable Hash, — Weighted Hash, — Least Connections, — Least Connections Per Service, — Round-Robin, — Response Time, — Bandwidth, etc</p>	
7	<p>Following Load Balancing Topologies should be supported: • Virtual Matrix Architecture • Client Network Address Translation (Proxy IP) • Mapping Ports • Direct Server Return • One Arm Topology Application • Direct Access Mode • Assigning Multiple IP Addresses • Immediate and Delayed Binding</p>	
8	<p>The proposed device should have Hypervisor (should not use Open Source) Based Virtualization feature (NO Multi-Tenancy) that virtualizes the Device resources— including CPU, memory, network, and acceleration resources. Each Virtual Instance contains a complete and separated environment of the Following: a) Resources, b) Configurations, c) Management, d) Operating System The proposed device should support 5 Virtual Instance from Day 1 and support upto 20 Virtual Instances for future Scalability on the same hardware. It should NOT use Open Source/3rd party Network Functions. The Proposed Appliance should support Standalone as well as Virtualized Mode (Bidder may be asked to demonstrate this feature during Technical Evaluation).</p>	

9	The proposed Hardware must have Bandwidth Mangement feature from Day 1	
10	The proposed device should support standard VRRP (RFC - 2338) for High Availability purpose (No Propertary Protocol). Other mode like Switch HA Mode, Extended HA Mode and Service HA Mode should also be supported.	
11	The solution should support IPv6 as well as IPv4 and have the ability to turn IPv4 traffic to IPv6 traffic on the backend	
12	Should support HTTP/2 and HTTP/3	
13	Supports SSL offload for the following protocols: — HTTPS — Generic SSL — SIP — SMTP (STARTTLS)* — IMAP (STARTTLS)* — POP3 (STARTTLS)* — LDAP (STARTTLS)* — FTPS*	
14	Supports the following health check types: • Link Health Checks, • TCP Health Checks, • UDP Health Checks, • ICMP Health Checks, • HTTP/S Health Checks, • TCP and UDP-based DNS Health Checks, • TFTP Health Check, • SNMP Health Check, • FTP Server Health Checks, • POP3 Server Health Checks, • SMTP Server Health Checks, • IMAP Server Health Checks, • NNTP Server Health Checks, • RADIUS Server Health Checks, • SSL HELLO Health Checks, • WAP Gateway Health Checks, • LDAP/LDAPS Health Checks, • Windows Terminal Server Health Checks, • ARP Health Checks, • DHCP Health Checks, • RTSP Health Checks, • SIP Health Checks, • Virtual Wire Health Checks, • DSSP Health Checks, • Script-Based Health Checks, • Cluster-based Health Checks,	

15	<p>Device should be accessed through the below:</p> <ul style="list-style-type: none"> • Using the CLI • Using SNMP • REST API • Using the Web Based Management 	
16	<p>The proposed Solution should be PCI Compliant WAF. It must be able to handle OWASP Top 10 attacks and WASC Web Security Attack Classification.</p>	
17	<p>WAF should have the flexibility to be deployed in the following modes: Reverse proxy Out of Path (OOP)</p>	
18	<p>Solution should dynamically understand the Changes on the Web/Application Server</p>	
19	<p>The Proposed WAF Solution should support both a Positive Security Model Approach (A positive security model states what input and behavior is allowed and everything else that deviates from the positive security model is alerted and/or blocked) and a Negative Security Model (A negative security model explicitly defines known attack signatures) . The solution must support automatic updates to the signature database to ensure complete protection against the latest web application threats</p>	
20	<p>The WAF should support the following escalation modes: a) Active, b) Bypass, c) Passive</p>	
21	<p>The solution must have a database of signatures that are designed to detect known problems and attacks on web applications</p>	
22	<p>Hiding Sensitive Content Parameters: It should be able to Mask values of sensitive parameters (for example, passwords, credit card and social security details)</p>	
23	<p>Solution should support GraphQL and API security</p>	
24	<p>WAF should support for IPv4 and IPv6 traffic along with DNS functionality from day-1</p>	
25	<p>Auto Policy Optimization</p>	
a	<ul style="list-style-type: none"> • Zero Day Attack Blocking 	
b	<ul style="list-style-type: none"> • Working in Learn Mode 	
c	<ul style="list-style-type: none"> • Auto Discovery 	
26	<p>Following Threats should be protected by the proposed WAF solution:</p>	
a	<p>Parameters Tampering</p>	
b	<p>Cookie Poisoning</p>	

c	SQL Injection	
d	Session Hijacking	
e	Web Services Manipulation	
g	Debug Options	
h	Backdoor	
f	Manipulation of IT Infrastructure Vulnerabilities	
g	3rd Party Misconfiguration	
h	Buffer Overflow Attacks	
f	Data Encoding	
h	Cross-Site Scripting (XSS)	
f	Brute Force Attacks	
g	OS Command Injection	
h	Cross Site Request Forgery (CSRF)	
g	Information Leakage	
h	Path (directory) Traversal	
f	Predefined resource location	
g	Malicious file upload	
h	Directory Listing	
f	Parameter Pollution (HPP)	
27	The proposed WAF should support the Activity Tracking, which should include the following:	
a	Dynamic IP	
b	Mimicking user behavior	
c	Anonymity	
d	Scraping	
e	Web application DDoS attacks	
f	Clickjacking	
28	Device Fingerprint-based tracking	
a	The Proposed WAF should support Device Fingerprint technology by involving various tools and methodologies to gather IP agnostic information about the source.	
29	Solution should provide signature update, geo-location database and attacker feed.	
30	Bidder should propose Centralized Management & Reporting Solution from Day 1.	
31	Solution should provide: Application Dashboard Per Application Analytics SLA Breakdown (Network, per server) SSL Statistics (handshake and cypher breakdown, rejected handshake) SSL CPS System Dashboard Network Dashboard L4 Events	

	Per transaction type events (delay, user agent, response, headers) SSL Events (type of handshake, cypher, TLS version)	
32	Offered solution should be EAL2 certified.	

9. Server Cyber Security Software with 1 year support

Sr No.	Minimum Specifications / Requirements	Compliance (Y/N)
General Requirement		
1	All modules i.e. Antimalware, HIPS, Firewall, Application control, FIM, Log correlation, C&C prevention must be available in single agent	
2	The proposed server security solution must support multiple platforms of server operating systems i.e. Windows, Linux RedHat,CentOS,Oracle,Debian,SUSE, Ubuntu,Solaris,AIX,Amazon Linux etc.	
	The Proposed solution must support Anti-malware, HIPS, Integrity Monitoring, Host Firewall for the below mentioned server operating system:	
	Microsoft Windows Server (2008 &2008 R2, 2012 & 2012 R2, 2016,2019), Red Hat Enterprise Linux (6,7,8), Solaris (10.0,11.0,11.1,11.2,11.3,11.4), Oracle Linux (6,7,8), AIX (6.1,7.1,7.2), CentOS (6,7,8) and Suse Linux (11,12,15)	
Host Based Firewall		
3	The firewall shall be bidirectional for controlling both inbound and outbound traffic and should have the capability to define different rules to different network interfaces	
4	Firewall rules should filter traffic based on source and destination IP address, port, MAC address, direction etc. and should detect reconnaissance activities such as port scans and should support stateful inspection functionality	
5	Solution should provide policy inheritance exception capabilities and ability to lock computer (prevent all communication) except with management server.	
6	Solution should have ability to run internal port scan on individual servers to know the open ports and will help administrator create rules.	
7	The firewall should be able to detect protocol violations of standard protocols and provision inclusion of packet data on event trigger for forensic purposes.	
8	Solution should have security profiles that allows firewall rules to be configured for groups of systems, or individual systems.	

Host Based Intrusion Prevention System		
9	The proposed solution should support Deep Packet Inspection (HIPS/IDS) and should support creation of customized DPI rules if required.	
10	Deep Packet Inspection should support virtual patching capabilities for both known and unknown vulnerabilities until the next scheduled maintenance window.	
11	Virtual Patching should be achieved by using a high-performance HIPS engine to intelligently examine the content of network traffic entering and leaving hosts.	
12	Deep packet Inspection should protect operating systems, commercial off-the-shelf applications, and custom web applications against attacks such as SQL injections and cross-site scripting.	
13	Solution should provide ability to automate rule recommendations against existing vulnerabilities, exploits, suspicious network traffic and dynamically tuning IDS/IPS sensor (Eg. Selecting rules, configuring policies, updating policies, etc...)	
14	Solution should provide recommendation for automatic removing of assigned rules if a vulnerability or software no longer exists - E.g. If a patch is deployed or software is uninstalled corresponding signatures are no longer required.	
15	The solution should allow imposing HTTP Header length restrictions and have the capability to inspect and block attacks that happen over SSL.	
16	The solution should allow or block resources that are allowed to be transmitted over http or https connections and capable of blocking and detecting of IPv6 attacks.	
17	Detailed events data to provide valuable information, including the source of the attack, the time and what the potential intruder was attempting to exploit, shall be logged.	
18	Solution should offer protection for virtual, physical, cloud and docker container environments.	
19	Deep Packet Inspection should have Exploit rules which are used to protect against specific attack variants providing customers with the benefit of not only blocking the attack but letting security personnel know exactly which variant the attacker used (useful for measuring time to exploit of new vulnerabilities).	

20	Deep Packet Inspection should have pre-built rules to provide broad protection and low-level insight, for servers. For operating systems and applications, the rules limit variations of traffic, limiting the ability of attackers to exploit possible attack vectors. Generic rules are also used to protect web applications (commercial and custom) from attack by shielding web application vulnerabilities such as SQL Injection and Cross-Site Scripting.	
21	Solution should work in Tap/detect only mode and prevent mode and support automatic and manual tagging of events also have CVE cross referencing when applicable for vulnerabilities.	
22	Solution should provision inclusion of packet data on event trigger for forensic purposes and shall protect against fragmented attacks also should allow to block based on thresholds	
23	Deep packet inspection should have signatures to control based on application traffic. These rules provide increased visibility into & control over the applications that are accessing the network. These rules will be used to identify malicious software accessing the network.	
24	Solution should have Security Profiles which allows DPI rules to be configured for groups of systems, or individual systems. For example, all Linux/Windows servers use the same base security profile allowing further fine tuning if required. Rules should be auto- Provisioned based on Server Posture. De-provisioning of rules should also be automatic if the vulnerability no longer exists.	
Integrity Monitoring		
25	Integrity Monitoring module should be capable of monitoring critical operating system and application elements files, directories, registry keys to detect suspicious behaviour, such as modifications, or changes in ownership or permissions.	
26	The solution should be able to monitor System Services, Installed Programs and Running Processes for any changes.	
27	Solution should have extensive file property checking whereby files and directories are monitored for changes to contents or attributes (ownership, permissions, size, etc.).	
28	Solution should be able to track addition, modification, or deletion of Windows registry keys and values, access control lists, or web site files are further examples of what can be monitored.	
29	Solution should support any pre-defined lists of critical system files for various operating systems and/or applications (web servers, DNS, etc.) and support custom rules as well.	

30	Solution should have automated recommendation of integrity rules to be applied as per Server OS and can be scheduled for assignment/assignment when not required.	
31	Solution should have by default rules acting at Indicators of Attacks detecting suspicious/malicious activities.	
32	In the Event of unauthorized file change, the proposed solution shall report reason, who made the change, how they made it and precisely when they did so.	
33	Solution should have Security Profiles which allows Integrity Monitoring rules to be configured for groups of systems, or individual systems. For example, all Linux/Windows servers use the same base security profile allowing further fine tuning if required. Rules should be Auto-Provisioned based on Server Posture.	
34	Solution should have an intuitive rule creation and modification interface includes the ability to include or exclude files using wildcards filenames, control over inspection of sub-directories, and other features.	
35	Solution should support the following: Multiple groups of hosts with identical parameters, Regex or similar rules to define what to monitor, Ability to apply a host template based on a regex of the hostname, Ability to exclude some monitoring parameters if they are not required, Ability to generate E Mail and SNMP alerts in case of any changes, Solution should support creation of custom Integrity monitoring rule and Solution should provide an option for real time or scheduled Integrity monitoring based on operating system.	
Anti Malware		
36	Anti-malware should support Real Time, Manual and Schedule scan and should have flexibility to configure different real time and schedule scan times for different servers and should have feature to try & backup ransomware encrypted files and restoring the same as well.	
37	Solution should support excluding certain file, directories, file extensions from scanning (real time/schedule) and use a combination of cloud-based threat intelligence combined with traditional endpoint security technologies.	
38	Solution should support True File Type Detection, File extension checking and have heuristic technology blocking files containing real-time compressed executable code.	
39	The proposed solution should be able to detect and prevent the advanced threats which come through executable files, PDF files , Flash files, RTF files and and/or other objects using Machine learning	

40	The proposed solution should be able to perform behaviour analysis for advanced threat prevention and have its own threat intelligence portal for further investigation, understanding and remediation an attack.	
41	Solution deployment should cause limited interruption to the current network environment also should have Ransomware Protection in Behaviour Monitoring.	
42	Solution should have Highly Accurate machine learning - Pre-execution and Run time analysis, document exploit prevention to address known/Unknown threats.	
Log Analysis and Co-Relation		
43	Solution should have a Log Inspection module which provides the ability to collect and analyse operating system, databases and applications logs for security events.	
44	Solution should provide predefined out of the box rules for log collection from standard applications like OS, Database, Web Servers etc. and allow creation of custom log inspection rules as well.	
45	Solution must have an option of automatic recommendation of rules for log analysis module as per the Server OS and can be scheduled for automatic assignment/unassignment of rules when not required.	
46	Solution should have Security Profiles allowing Log Inspection rules to be configured for groups of systems, or individual systems. E.g. all Linux/Windows servers use the same base security profile allowing further fine tuning if required.	
47	Solution should have ability to forward events to an SIEM system or centralized logging server for eventual correlation, reporting and archiving.	
48	Log Inspection rules should allow setting of severity levels to reduce unwanted event triggering.	
49	Customized rule creation should support pattern matching like Regular Expressions or simpler String Patterns. The rule will be triggered on a match.	
50	Ability to set dependency on another rule will cause the first rule to only log an event if the dependent rule specified also triggers.	
51	Solution must support decoders for parsing the log files being monitored.	
Application Control		
52	Solution should allow administrators to control what has changed on the server compared to initial state and should prevent unknown and uncategorized applications from running	

	on critical servers also must support Global Blocking on the basis of Hashes and create blacklist for the environment.	
53	Solution should have option to allow to install new software or update by setting up maintenance mode and should have ability to scan for an inventory of installed software & create an initial local ruleset.	
54	Change or new software should be identified based on File name, path, time stamp, permission, file contents etc. and must have ability to enable maintenance mode during updates or upgrades for predefined time period.	
55	Logging of all software changes except when the module is in maintenance mode and Should support Windows & Linux operating systems.	
56	Should have the ability to enforce either Block or Allow unrecognized software and must support Lock Down mode: No Software is allowed to be installed except what is detected during agent installation.	
Command & Control Prevention		
57	solution must be able to block all communication to Command & control center and must be able to identify communication over HTTP/HTTPS protocols and commonly used Http ports.	
58	Solution must provide by default security levels i.e. High, Medium & low so that it eases the operational effort and Solution must have an option of assessment mode only so that URLs are not blocked but logged.	
59	solution must be able to detect/prevention communications to Global C&C's and Allow administrators to create user defined list of allowed/blocked URL's.	
Management Features		
60	Management of proposed solution should support both windows as well as linux platform in high availability configuration for DC/DR setup.	
61	The solution shall be able to deliver all the above mentioned features like Anti- malware, Host Based Firewall/ IPS, File Integrity Monitoring, Log Inspection & Application control in a single agent.	
62	Once the policies are deployed, the agents should continue to enforce the policies whether the management server is available or not and Agent installation should not require a restart of the server.	
63	Agent installation methods should support manual local installation, packaging with third party software distribution systems and distribution through Active Directory.	

64	Any policy updates pushed to the agent should not require to stop the agent, or to restart the system and Solution should provide ability to hide agent icon from getting displayed in system tray.	
65	The solution should be able to automate discovery of new agents that are installed on any servers and should have the capability of supporting new Linux kernels as & when they are released.	
66	The solution shall allow to do all configurations from the central management console like enabling/disabling agents, selecting and applying new policies, creating custom policies, reports etc.	
67	The solution should give the flexibility of deploying features either as agent based or agentless for different modules depending on organization's data center environment.	
68	The proposed solution should be managed from a single centralized web-based management console.	
69	The solution shall have the capability to disable the agents temporarily from the Central Management console & such action should be logged.	
70	The solution shall allow to do all configurations from the central management console including, but not limited to enabling/disabling agents, selecting and applying new policies, creating custom policies, reports etc.	
71	The solution should have comprehensive Role Based Access Control features including controlling who has access to what areas of the solution and who can do what within the application.	
72	Should support integration with Microsoft Active directory and should allow grouping into smart folders based on specific criteria like OS, policy etc. for easy manageability.	
73	Solution should support the logging of events to a non-proprietary, industry-class database such as MS-SQL, Oracle, PostgreSQL.	
74	The solution shall allow grouping security configurations together in a policy and also allow to apply these configurations to other similar systems.	
75	The solution should support forwarding of alerts through SNMP, E-Mail and should be able to generate detailed and summary reports.	
77	The solution shall allow scheduling and E Mail delivery of reports and should have a customizable dashboard that allows different users to view based on their requirement.	

78	The solution should support Web Services if it is required to export data out to other custom reporting solutions and shall allow creation of custom lists, such as IP Lists, MAC lists etc. that can be used in the policies that are created.	
79	Administrators should be able to selectively rollback rules applied to agents and should maintain full audit trail of administrator's activity.	
80	Solution should have an override feature which would remove all the applied policies and bring the client back to default policies.	
81	OEM must have contributed at least 50 zeroday/undisclosed vulnerabilities of Microsoft continuously from past 5 years and data should be publically available.	
82	The solution shall allow updates to happen over internet or shall allow updates to be manually imported in the central management system and then distributed to the managed agents. Additionally solution must also have an option of defining machine to be updatere relay only.	
83	Proposed solution should work in Air Gap scenario supporting offline signature update mechanism	
84	The OEM TAM should conduct half yearly health check for the deployed solution.The health check should cover detailed configuration audit , findings and recommendations of the deployed solution	
Global Recognition		
83	The Proposed solution should be Leader in server security market as per IDC latest report	
84	The Proposed OEM should be leader in advance Global Vulnerability Research and Discovery market share as per latest Frost & Sullivan Reports	
85	The proposed OEM should be in Leader Quadrant as per Gartner Magic Quadrant of EPP category from last 5 consecutive years	

SN	Description	Make	Model	Remark
4	(D) Hardware and Software on OPEX/Rental Mode (for the period of 1 (one) year			
4.01	Additional storage --2 nos. WITH REPLICATION FEATURES (For DC AND DR to host Database and application server atleast 150 TB ALL FLASH STORAGE)			
4.02	Cloud storage of 30 TB (usable) from MEITY empaneled cloud service provider for storing backup of important application from UPCL Data Center to Cloud location and its retrieval (as and when required) for the period of one year. The software required to copy the backup to cloud location shall be provided by the service provider.			
4.03	Monitoring software for DC			
4.04	BACKUP SOFTWARE			
4.05	Identity and Access Management Software for UPCL billing Solution			
4.06	Load Balancer/Web Application Firewall			
4.07	Server Cyber Security Software with 1 year support			
4.08	One time implementation and Data Migration Cost - Includes (Backup, IDAM Setup, Servers, Load balancer, Deep Security and Storage Data Migration Cost) (20% of total hardware and software cost on capex and rental mode)	NA	NA	NA
5	(E) Hardware on CAPEX mode			
5.01	IBM RISC server on power 10 Processor			
5.02	Backup server (including OS for server) to keep the backup as our tape libraries are already old			
5.03	XEON SERVER -4 Nos. with atleast Dual processor 32+32=64 core, 512 GB RAM, HBA controller and Virtualization software to create unlimited virtual machine of desired cores with no restriction on cores and resource allocation.)			