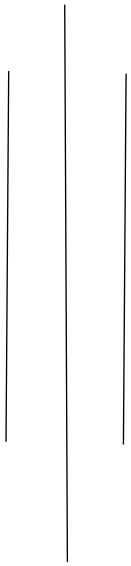
Request for Proposal
For
Appointment of an Agency for Implementation of Mizoram e-Services Portal and Upgradation of Mizoram SDC into Cloud Environment

RFP No. B.12020/25/2023-MSeGS



Mizoram State e-Governance Society (MSeGS)
Secretariat Building ANNEX-1
Treasury Square, Aizawl
Mizoram- 796001

REQUEST FOR PROPOSAL

RFP No: **B.12020/25/2023-MSeGS** Dated:

(Please specify RFP No. in all your correspondence)

Mizoram State e-Governance Society (MSeGS) on behalf of Government of Mizoram invites bids for Appointment of an Agency for Implementation of Mizoram e-Services Portal and Upgradation of Mizoram State Data Centre into Cloud Environment for a period of One (1) year in accordance with the various provisions of this RFP document. The Implementing Agency shall be finalized based on the competitive bidding process.

Proposals in the form of bids are invited from interested bidders as per the requirements and guidelines given below:

Bidders should submit Bid Documents through the Mizoram e-Procurement portal (https://mizoramtenders.gov.in). Bid documents may be in three parts such as

PART-I: Pre-Qualification Bid complete with all details.

PART-II: Technical Bid complete with all relevant details.

PART-III: Financial Bid with full price details.

Note: Filling up prices in Part II will render the bidder disqualified.

IT Infrastructure and Services offered should be strictly as per the requirements mentioned in the RFP document.

Once quoted, the bidder shall not make any subsequent price changes. Such price changes shall render the bid liable for rejection.

Bidder shall quote prices of products and services as mentioned with a validity of 180 days.

The complete RFP document is available at websites namely, https://tender.mizoram.gov.in/, https://msegs.in/ and https://mizoramtenders.gov.in)

Pre-Bid meeting will be held on 14th August, 2023; 13:00 Hrs.

Bids complete in all respects must reach the designated address on or before the BID DUE DATE i.e. 31st August, 2023; 12:00 Hours. Part-I (Prequalification Bids) will be opened on 31st August, 2023; 13:00 Hours and Part-II (Technical Bids) will be opened on 1st September 2023; 11:00 Hours.

Chief Executive Officer, MSeGS reserves the right to accept or reject any or all the responses to the said RFP without assigning any reason.

Sd/-
Chief Executive Officer
Mizoram State e-Governance Society (MSeGS),
Aizawl, Mizoram

IMPORTANT INFORMATION

S. No	Information	Details
1.	RFP No. and Date	**B.12020/25/2023-MSeGS Dated**
2.	Name of the Work	Request for Proposal for Appointment of an Agency for Implementation of Mizoram e-Services Portal & Upgradation of Mizoram SDC into Cloud Environment
3.	Publication details	The RFP would be published at https://mizoramtenders.gov.in/, https://tender.mizoram.gov.in/ https://msegs.in/
4.	Date of Commencement of Bid	7th August 2023 (Monday)
5.	Earnest Money Deposit (EMD)	₹15,00,000/- (Rupees Fifteen Lakhs Only) (Demand Draft/Pay Order, issued by any nationalized bank in India, drawn in favour of Mizoram State E- Governance Society payable at Aizawl,)
6.	Contract Period/ Duration of the Project	One (1) year from the date of issue of Work Order by MSeGS.
7.	Mode of Submission	e-Submission through https://mizoramtenders.gov.in/, and the Bids cannot be submitted after the due date and time.
8.	Last date for submission of written queries for clarifications	14th August 2023 (Monday), 12:00 Noon. Email:ringa.dict@mizoram.gov.in, vanlalringa@gmail.com
9.	Date of pre-bid conference	14th August 2023 (Monday), 1:00 PM.
10.	Release of response to clarifications	18th August 2023 (Friday)
11.	Bid validity period	180 days from the last date (deadline) for submission of proposals.
12.	Last date (deadline) for submission of bid documents	31st August 2023 (Thursday), 12:00 Noon
13.	Opening of Pre-Qualification Bids	31st August 2023 (Thursday), 1:00 PM.

S. No	Information	Details
14.	Opening of Technical Bids	1st September 2023 (Friday), 11:00 AM.
15.	Technical Presentation by the Bidders	Will be intimated to the bidders later.
16.	Place, Time and Date of opening of financial proposals received in response to the RFP notice	Will be intimated to the bidders later.
17.	Contact person for queries	Mr. Vanlalringa Sr Technical Officer, MSeGS 4th Floor, Old Secretariat Bldg-1 Treasury Square, Aizawl-796001. Phone - 9436144792 Email – ringa.dict@mizoram.gov.in, vanlalringa@gmail.com
18.	Addressee and address at which proposal in response to RFP notice is to be submitted:	Dr. LALTHLAMUANA CEO, MSeGS 3rd Floor, Old Secretariat Bldg-1 Treasury Square Aizawl-796001, Mizoram Phone – 0389-270-0002 Email – ceo.msegs@mizoram.gov.in

Note: Neither the MSeGS nor their representatives are obligated to inform any bidders who have not qualified in any of the stages of bid process management.

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Section – I

Executive Summary

Section I. Executive Summary

Component – I: Mizoram e-Services Portal

Several e-Governance projects are taken up by Department of Information & Communication Technology, Government of Mizoram which enhances the livelihood of the citizen. One important aspect of these initiatives is the online delivery of government services (e-Services) to the citizen.

Project/Department	Description
e-District	31 Services from 8 Departments are available under the eDistrict Project
e-Bharat	52 Services from 20 Departments are available under the eBharat Project
MPSC	Comprehensive online system for Mizoram Public Service Commission in which publication of advertisement, applicant registration, application submission, admit card and result publication are done online.
MSSSB	Comprehensive online system for Mizoram Subordinate Service Selection Board in which publication of advertisement, applicant registration, application submission, admit card and result publication are done online.
Vahan	An application used by Transport Department for vehicle registration related services.
Sarathi	An application used by Transport Department for license related services.
CMS	A content management software being used by most departments and institutions under Government of Mizoram for their website. Form builder is inbuild to accept online application from citizen. More than 300 websites of Departments, Societies, Institutions etc. are deployed using this CMS.
EoDB	Single Window Clearance System under Government of Mizoram. 92 services under 17 Departments are available through the EoDB Portal.
RoW	Telecom Right of Way portal.
PHE Online System	Online Application for New Water Connection
Utility Bill Payment	Online Water and Electricity Bill Payment System
Mizoram Scholarship Portal	Online Portal for Scholarship Application
Hna Inpui (MYC)	Online Job Portal
Taxation	Online e-waybill and payment of VAT related taxes.

Tourism	Online Booking of Tourist Lodges under Tourism Department
PWD	Online Road Cutting Application
PDS	PDS related online services
RTPS	Notified services under Right to Public Service Act are available online.

These e-services are available through their own separate website. It is proposed to implement a centralized single web portal wherein citizen and business can avail all e-Services available in the State and further expand the number of e-Services in the State. Government of Mizoram desires to create an integrated information infrastructure that will expand, synthesize and enhance the utility and reach of the services provided by the Government. The project aims to strengthen the existing infrastructure and implement the e-Services Portal as the informative, interactive, integrated and trusted service delivery platform for all the Government to Citizens (G2C) and Government to Business (G2B) services of the State and its constituent departments. For the additional e-services, Web services will be designed so that citizens can submit online applications and Departments can get the service as per the defined workflow. Citizen will be able to get notifications and alerts regarding the status of service. For services involving payment, payment gateway services will also be available. The hosting requirements will be provided through Mizoram State Data Center.

It is envisaged that the Mizoram e-Services Portal will provide easy, anywhere and anytime access to Government Services from a single point, thus simplifying and streamlining the delivery of services to the citizen. The following list of services are to be e-enabled and make it available to this Mizoram e-Services Portal:

S. No	Department	S. No	Service
1.	Sports & Youth Services	1.	Application for Golden Arrow
		2.	Application for Rashtrapati Scouts/Guides
		3.	Application for Rashtrapati Rover/Ranger
		4.	Application for Upa-Rashtrapati Awards Scheme
		5.	Application for Group Registration
		6.	Application for Life Member/Ordinary Member
		7.	Online Registration for Basic/Advances Training Course under Scouts & Guides
		8.	Application for HWB (Scout/Guide)

		9.	Application for Pre-ALT (Scout/Guide)
		10.	Application for LT (Scout)
2.	Information & Public Relation	11.	Journalist Welfare Registration
		12.	Application for News Agency Accreditation
3.	Tourism	13.	Application for Recognition certificate for Hotel and Tour operators
4.	Power & Electricity	14.	Application for New Service Connection
		15.	Online Bill Payment (Non-RAPDRP)
		16.	Complaints regarding Water Connection
5.	Art & Culture	17.	Online State Library Catalog
		18.	Archive Digitization
		19.	Training Registration & Management
		20.	Vanapa Hall Booking and Reservations
		21.	Application for Hiring of Culture Dress
6.	Higher & Technical	22.	Online Admission for Colleges
		23.	Result Publication
		24.	Certification Validation and Verification
		25.	Online MSCTE Affiliation for Private
		26.	Polytechnic Online Result Publication
7.	Pollution Control Board	27.	Online registration of Industries
		28.	Online application for consents/authorizations and renewals
		29.	Online application of consents/authorizations and issuance of certificates.

		30.	Complaints/public grievances
		31.	Online PUCC Certificate Application and Renewal
		32.	On the spot pollution complaint registration
		33.	Submission of Annual Report under Waste management Rules
8.	Health & Family Welfare	34.	OPD Registration
		35.	Online Reporting of Disease Outbreak
		36.	Online registration of Industries
9.	Environment & Forest	37.	Permission for research application
		38.	Application for Permission to visit local forests area
10.	Agriculture	39.	Application for subsidies on farm implements
		40.	On demand Advisory Service for general information, pest and disease surveillance
11.	Soil & Water Conservation	41.	Citizen Reporting System (Citizen reports landslide in terrace and fields)
		42.	Application for Water harvesting scheme
12.	Cooperative Society	43.	Registration of Society (Aadhaar linked registration)
		44.	Online Approval of Society Resolution
		45.	NSCU Annual Subscription fee collection
13.	Horticulture	46.	Application for Farmer training
		47.	Application for subsidy
14.	Rural Development	48.	Grievances – Citizen Journalist
15.	Social Welfare	49.	Application for Old Age Pension Card

		50.	Application for Widow Pension Card
		51.	Application for Disability Pension Card
		52.	Application of Scholarship for Children of Poor Widows
		53.	Application Form for Disbursement of Widow disability Pension Scheme
16.	Commerce & Industries	54.	Application for Grants and Subsidies for MSME
		55.	Payment of fees for stores and go-downs
		56.	Movement permit fee collection
		57.	Market fee collection
		58.	Application of permit for agriculture produce

Note: The list of services are subject to change and will be finalized before implementation in coordination with the line departments.

Component – II: Mizoram State Data Center (MSDC)

Mizoram State Data Centre was inaugurated on 22nd July, 2014. State Data Centre (SDC) has been identified as one of the important elements of the core infrastructure for supporting e-Governance initiatives of National e-Governance Plan (NeGP).

The SDCs aim to consolidate services, applications and infrastructure to provide efficient electronic delivery of G2G, G2C and G2B service. The services are rendered by the States through common delivery platform seamlessly supported by core Connectivity Infrastructure and Common Service Centre (CSC) connectivity extended up to village level. State Data Centre provides many functionalities and some of the key functionalities are Central Repository of the State, Secure Data Storage, Online Delivery of Services, Citizen Information/Services Portal, State Intranet Portal, Disaster Recovery, Remote Management and Service Integration etc.

The Mizoram State Data Centre (MSDC) provides better operations & management control; minimize overall cost of Data Management, IT Management and Deployment through use of common infrastructure, which broadly includes:

i. **Compute Infrastructure:** To cater to the needs of application hosting at the State, an initial compute infrastructure consisting of web, application and database servers with different flavours of OS & database software has been provisioned in the SDC.

ii. **Storage Infrastructure:** Centralized storage with flexible and secure configurations are available in the SDC including backup facilities and leveraged by different line departments for their data storage requirements in a shared manner.

iii. **Network and Security Infrastructure:** Core network infrastructure that is a requirement of every Data has been provided for every SDCs and has been designed with sufficient capacity to meet the basic needs of the State Data Centre.

Till now, Mizoram SDCs have been equipped with infrastructure which will enable State departments with seamless, highly reliable/robust, shared, and secured infrastructure with scalable capacity. However, for a project of this nature it is prudent to assess the need forintegrating the latest but matured technology advancements to make them future-proof for optimal utilization, Better Management, and Monitoring.

To address issues typically faced by different departments of Mizoram, such as long IT infrastructure procurement cycles, underutilization of resources, need for dynamic scalability, appropriate disaster recovery of applications and data, and for simplifying IT infrastructure provisioning & availability to line departments to cloud-based service delivery in an accelerated manner, to start with, it would be required to leverage the benefits of Cloud-enabled services in Mizoram State Data Centre.

It is in this context, that the MSDC components have been analyzed with respect to the following areas:

Upgradation of Existing Infrastructure

Supply, Installation, Configuration, Support & Comprehensive Onsite Warranty Support of supplied IT Hardware as per the technical specification provided in the RFP for upgradation of existing infrastructure at MSDC.

Cloud Enablement

- Server Virtualization
- Self Service provisioning
- Automation, Orchestration and Monitoring

After having analyzed the infrastructure at present provisioned in the MSDC's and technology advancements MSeGS has thus initiated the process for implementing a Cloud based Service Delivery Model in MSDC, so that the SDC IT Infrastructure can be shared amongst multiple departments. Thus, making the MSDC as a Private Cloud operated for State of Mizoram and to be managed by the implementing agency / third party/ MSeGS.

Following are the important characteristics of a well-managed cloud-based service delivery model:

i On-demand self-service
   - Line Departments can unilaterally provision computing capabilities

ii Broad network access
   - Capabilities are available over the network
   - Accessed through standard mechanisms

iii Resource pooling
   - Computing resources are pooled to serve multiple Line Departments
   - Location independence

iv Rapid elasticity
   - Capabilities can be rapidly and elastically provisioned
   - Create a cascading effect of improved efficiency in increasing the number of services to be offered by various departments due to on demand availability of infrastructure.

Departments can concentrate on their core competencies of providing related services and rely on the SDAs (State Designated Agency) to deliver the required infrastructure.

v Measured service

- Resource usage can be monitored, controlled, and reported
- Create an IT governance mechanism within States as they leverage common / shared platforms to speed up the process of service delivery.

This document is a Request for Proposal (RFP) for Bidders to quote for the design, development, testing, deployment and training for the e-Services portal and the Supply, Installation, Configuration, Testing, Training, Support & Comprehensive Onsite Warranty Support of supplied IT Hardware for Upgradation of Infrastructure and Cloud Enablement in Mizoram State Data Centres (MSDC) for duration of the project for one (1) year. The successful Bidder shall do the supply, installation, configuration, testing, training and support and do FAT as per the specifications and the minimum specified Scope of Work to be undertaken by the successful Bidder.

Section – II

Invitation to Bid

Section II. Invitation to Bid

The invitation to Bid is for "Supply, Installation, Configuration, Testing, Training , Support , Final Acceptance Test for the Components and Comprehensive Onsite Warranty Support of supplied IT Hardware of the Mizoram State Data Centres for upgradation of Infrastructure and Cloud Enablement" that are being procured through this RFP, for the duration of the project as mentioned in "**IMPORTANT INFORMATION**" section.

The Bidders are advised to study the tender document carefully. Submission of Bids shall be deemed to have been done after careful study and examination of the tender document with full understanding of its implications. This section provides general information about the Issuer (i.e. MSeGS), important dates and addresses and the overall eligibility criteria for the Bidders.

2.1. Issuer

Mizoram State e-Governance Society (MSeGS) would herein after refer as Issuer / Purchaser / Client invites proposals for 'Appointment of an Agency for Upgradation of Mizoram SDC into Cloud Environment and Operational Maintenance i.e. Supply, Installation, Configuration, Support and Comprehensive Onsite Warranty Support of supplied IT Hardware of the Mizoram State Data Centres Upgradation of IT Infrastructure and Cloud Enablement as per the scope of the Bid'.

2.2. Issuer and Address

Chief Executive Officer
Mizoram State e-Governance Society (MSeGS)
Old Secretariat Building ANNEX-1
Treasury Square, Aizawl
Mizoram- 796001
Phone No: - 0389-270-0002

2.3. Cost of Bidding

Bidder shall bear all costs associated with the preparation and submission of the Bid including surveys (if required), and MSeGS will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

2.4. RFP Document

Bidders are expected to examine all instructions, forms, terms, specifications, and other information in the RFP document. Failure to furnish all information required by the RFP document or to submit a Bid not substantially responsive to the RFP document in every respect will be at Bidder's risk and may result in the rejection of its Bid.

2.5. Clarification of RFP document and Pre-Bid Conference

1. The bidders or their designated representatives may be invited to attend the Pre–Bid Conference (PBC) at their own cost, on 9th August, 2023; 15:00 Hours at the following venue:

   Mizoram State e-Governance Society (MSeGS)
   Old Secretariat Building – I,
   Treasury Square, Aizawl – 796001, Mizoram

2. In this PBC, Tenderer would address the clarifications sought by the bidders with regard to the RFP document and the project. The bidders would be required to submit their queries to Chief Executive Officer of MSeGS in writing (or by E-mail) to be received on or before 14th August, 2023; 12:00 Hours. Queries not submitted within this deadline may not be taken up at the PBC. The queries must be submitted in the following format only to be considered for clarification.

Sl. No.	Section No.	Clause No.	Reference / Subject	Clarification Sought

3. Tenderer reserves the right not to respond to any/all queries raised or clarifications sought if, in their opinion and at their sole discretion, they consider that it would be inappropriate to do so or do not find any merit in it. The minutes of the PBC shall be circulated by tenderer to all those companies who have submitted queries for clarification.

2.6. Amendment of RFP Document

1. At any time prior to the deadline (or as extended by MSeGS) for submission of bids, MSeGS, for any reason, whether at its own initiative or in response to clarifications requested by prospective bidder may modify the RFP document by issuing amendment(s).
2. All bidders will be notified of the amendment(s) by publishing on the websites, and these will be binding on them.
3. In order to allow bidders a reasonable time to take the amendment(s) into account in preparing their bids, MSeGS, at its discretion, may extend the deadline for the submission of bids.

2.7. Language of Bid

The bid prepared by the bidder, as well as all correspondence and documents relating to the bid exchanged between the bidder and the MSeGS, shall be in English. Supporting documents and printed literature furnished by the bidder may be in another language provided they are accompanied by an accurate translation by MSeGS certified / approved translator of the relevant pages in English. For the purposes of interpretation of the bid, the translation shall govern. Information supplied in another language without proper translation shall be rejected.

Section – III

Eligibility Criteria and Technical Bid Criteria

Section III. Eligibility Criteria and Technical Bid Criteria

3.1. Pre-Qualification Criteria

The Bidder must possess the requisite experience, strength and capabilities in providing the services necessary to meet the requirements as described in the RFP document. Keeping in view the complexity & volume of the work involved, the following criteria are prescribed as Pre-Qualification Criteria for Bidder interested in undertaking the project. The Bidder must also possess the technical know-how and the financial wherewithal that would be required to successfully provide the upgraded IT Infrastructure, Cloud Solution and required support services sought by the SDA. The Bids must be complete in all respect and should cover the entire scope of work as stipulated in the tender document. The invitation to Bid is open to all Bidders who qualify the eligibility criteria as given below:

Table 1: Pre-Qualification Criteria

SL. No.	Clause	Documents required
1.	The Bids should be submitted by only the prime Bidder; no consortium is allowed in this Bid	Declaration in this regard needs to be submitted
2.	The responding firm / agency should have submitted a **Bid Security** (EMD) of ₹15,00,000 (Rupees Fifteen Lakhs) only.	Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee from any of the Commercial Banks valid for a period of 45 days beyond the final bid validity period.
3.	Legal Entity Company should be registered under Companies Act, 1956 or 2013. Registered with the Service Tax Authorities	Certificate of Incorporation. Registration Certificate
4.	The Bidder should have positive net worth of ₹25 crores as on 31st March 2023 viz; 2020-21,2021-22 and 2022-23	Certified Audited Balance Sheets of relevant periods and a certificate from the Chartered Accountant / Cost Accountant indicating the net worth for the relevant period shall be submitted with the bid. viz 2020-21, 2021-22 and 2022-23 Note: 2022-23 Provisional Balance Sheet also accepted
5.	The Bidder's average annual turnover should be more than ₹40 crores in each of thelast three financial years viz; 2020- 21, 2021-22 and 2022-23	Certified Audited Balance Sheets of relevant periods and a certificate from the Chartered Accountant / Cost Accountant indicating the turnover details for the relevant period shall be submitted with the bid. viz 2020-21, 2021-22 and 2022-23

SL. No.	Clause	Documents required
	Note: The turnover refers to the Bidder's firm and not the composite turnover of its subsidiaries/sister concerns etc.	Note: 2022-23 Provisional Balance Sheet also accepted
6.	Bidder should have experience of supply, installation, commissioning and annual maintenance services for IT Infrastructure projects and shouldhave been in the business for a period exceeding five years as on 31.03.2023	Copies of relevant P.O./ Work Order/ Supply Order/ Agreement confirming year and area of activity
7.	Bidder should have experience of end-to-end application development at Enterprise level in Government Sector & database migration /upgradation / application development project with an order value of ₹ 4 Crore and should have been in the business for a period exceeding five years as on 31.03.2023	Copies of relevant P.O./ Work Order/ Supply Order/ Agreement confirming year and area of activity and Completion / Performance / Go Live Certificate
8.	The Bidder must have implemented/ commissioned at least one Cloud Implementation / HCI Implementation in Data Centre in India as on 31.05.2023 (In case of Cloud Experience: Cloud Implementation for providing Cloud based services in their own Data Centre or on to the customer Data Centre shall beconsidered)	a. Copies of relevant P.O./ Work Order/ Supply Order/ Agreement confirming year and area of activity and Completion / Performance / Go Live Certificate b. Valid Work Order and Certificate from the Client in case implementation/ commissioning in Client Data Centre OR a. Declaration from the Company Secretary confirming the Cloud Implementation in their own Data Centre for providing services to the customers. **b.** Client certificate confirming the cloud services they are getting from the Bidders Data Centre
9.	The Bidder must have the following valid certification as on bid submission date: - ISO 9001:2015 (Quality Management System)	Valid Copy of the Certifications stating the scope of the certification

SL. No.	Clause	Documents required
	- ISO/IEC 27001:2013 (Information Security Management System) - CMMI Development V2.0 (CMMI DeV) ML3	
10.	The Bidder must have on its roll at least 100 Technically qualified professionals in system integration, virtualization and prior experience in providing the Cloud Solution as on 31.05.2023	Certificate from Bidder's HR Department for the number of Technically qualified professionals employed by the company with their skill set
11.	Bidder shall submit Power of Attorney, duly authorizing the person signing the documents to sign on behalf of the bidder and thereby binding the bidder	Power of Attorney in favour of Authorized Signatory
12.	The Bidder shall not be under a Declaration of Ineligibility for corrupt or fraudulent practices or blacklisted with any of the Government agencies.	Declaration in this regard by the authorized signatory of the Bidder
13.	The Bidder should submit valid letter from all the OEMs confirming the following: • Authorization for Bidder • Confirm that the products quoted are not "end of life or end of sale products" as on Bid Submission date. If in case the support for the product quoted has been stopped/ withdrawn till the time of delivery of equipment, the same will be changed with the superior product at no extra cost • Undertake that the support including spares, patches, upgrades for the quoted products shall be available for the period of the Project	Relevant documentary evidences like Authorization letters (MAF (Manufacturers association Form) from all Vendors whose products are being quoted by the Bidder need to be attached in the proposal)

NOTE: Please submit all the documentary evidence in support of the above conditions as the eligibility criteria. The bidder has to ensure that all pages of the bid are signed by the competent authority.

3.2. Technical Bid Criteria

The Technical Bid Criteria is as Section-XI- Format 3 – Technical Bid Evaluation Criteria

Section – IV

Scope of Work

Section IV. Scope of Work

4.1. Scope of Work for Mizoram e-Services Portal

The minimum specified Scope of Work for Mizoram e-Services Portal is given below and the work is to be performed as per the requirement described in this document. Any further amendments issued in this regard will be notified to the Implementation Partner and the Contract is to be signed by the Bidder successfully.

4.1.1. Application Software Requirement

The scope of work for the successful bidder with respect to the Application development of Mizoram e-Services Portal and various e-Services as listed in in this document which includes Solution Design, Development, Testing and Training. The major works being:-

Design and Development

1. To prepare a System Requirement Specification (SRS) report-based on an independent assessment of the requirement of the Department and the functional requirements as specified in this Tender document for e-enabling the services identified for implementation under this project.
2. To design the solution architecture.
3. To develop the solution based on the specification finalized through the System Requirement Specification (SRS) and solution design.

Note:-

1. *Process flow/work flow of all the services will be provided to the successful bidder for preparation of Use Cases*
2. *Relevant database details of existing applications will be provided to the successful bidder.*

Application Software Testing

1. To design test cases for the solution using the data, to be digitized separately
2. To prepare the testing approach plan
3. To perform the testing solution based on the approved test plan, document the results and fixing of the bugs found during testing.
4. Standards of e-Governance has to be adhered. MSeGS to provide the details at the time of implementation.

Installation

1. Installation and Configuration of the solution.
2. Installation/integration of Operating System, Database, Application Server etc.
3. Configuration of users, providing access as per roles defined.
4. Updation of installation manuals with lesson learnt/identified gaps.

Implementation

1. To implement the solution – based on the assessment of the software, user acceptance and testing.
2. To ensure that the software design and implementation takes care of necessary security aspects such as data safety, access controls, integrity, backup measures and data recovery.
3. Incorporation of changes, if any, in the solution.

Training

1. To impart training to the stakeholders and shall undertake change managements interventions as necessary to achieve project objectives.
2. To train the designated technical and end user staff to enable them to effectively operate the system
3. To prepare the detailed training plan and training manuals.
4. To conduct citizen awareness campaigns to impart awareness to citizens on the e-Services portal model of service delivery mechanism.

Technical Documentation

1. To provide full documentation of the SRS and design (including Entity Relationship (ER) diagrams, flow diagrams, UML diagrams etc.) installation and implementation of the software and user manuals both in hard copy and a soft copy.
2. All other technical documents related to the project.

4.1.2. Hardware and Networking Requirement

Hardware and networking requirement will be provided by Mizoram State Data Center.

4.1.3. Training Requirements

4.1.3.1. Training Plan

Based on the roles and responsibilities of officials at various levels, the training plan is proposed to capture the need and requirement of skill and capacity enhancement of the officials. Also, at the same time based on the functional change in the working of government officials, a need assessment has been taken up to identify the training need requirement at the various levels. The participatory Departments will adopt a strategic human resource management system, looking at an employee as a vital resource to be valued, motivated, developed, and enabled to achieve the organization's mission and objectives.

The Departments will adopt a 'Competency based' staff management and development approach. Competencies encompass the knowledge, skills and behavior, which are required in a staff member for effectively performing the functions of a post. Competencies may be broadly divided into those that are core skills which the staff would need to possess with different levels of proficiency for different functions or levels. Some of these competencies pertain to leadership, Change management, information technology, project management and HR.

Based on the organizational hierarchy of the administration and the envisaged roles and responsibilities, it is proposed to create 4 bands – Group (1, 2, 3 and 4) for training purpose only. This will enable to ease the training of staff and also at the same time will integrate the understanding of various actors. The group strength mentioned here are indicative. The actual figures may increased or decreased by the Department. The department may add or remove officials from each of the group during training.

Band	Officials	Group Strength (Approx)
Group 1	Directors, Addl. Directors, Dy. Directors	30
Group 2	Nodal Officers, SPOC	30
Group 3	Section Officer, Superintendent, Inspector etc	80
Group 4	District Office Supdt., Dealing Assistant and others	200
Group 5	CSCs	400
TOTAL		740

4.1.3.2. Training Need Analysis

A training need is a need for human performance improvement that can best be met by training of some kind. This need must be spelled out in clear behaviourally oriented terms.

When a needs analysis to target the training needs is carried out, the modus operandi for identifying targeted training needs is called the Training Needs Analysis Model. The Training Needs Analysis Model summarizes the actions necessary to complete the first phase of the Training Model— Identify Targeted Training Needs.

To comply with the training need a study was conducted for collection and analysis of the current level of awareness, skills and abilities on processes, computers and IT applications of the officials and staffs of different sections and Offices. The current skill levels was then matched with the required skill and there by bridging the identified gaps. This analysis along with the attitudinal issues acted as the input for designing the training programme with respect to the pedagogy, training curriculum, training agenda and the contents.

Understanding the change in the revised process which will emanate because of implementation of application, training and capacity building of the officials cutting across departmental lines becomes quintessential. During the 'As-Is' study phase, an in-depth analysis of need and requirement of training to meet the requirement as proposed in the application was undertaken.

The staff development through Change management & Capacity Building in Departments will be a continuous and systematic process. All training should be based on the identification of Department's needs related to its corporate functions, policies and objectives within the general administrative framework of a public organization. The process of training should be directed to inculcate in every employee a sense of professionalism, excellence, motivation and stakeholder satisfaction, but also a sense of the values and ethos of the organization; an awareness of the fact that, whatever their roles, employees are first and foremost public officers.

The training plan of Department will need to address the gaps between the existing and the required competencies and provide opportunities for employees to develop their competencies. All staff shall be provided with training to equip them with the competencies for their current

or future job. Such training will be imparted at the time of their entry into service, and at appropriate intervals during the course of their careers. The Department will link the training and development of competencies of individuals to their career progression and ensure this by suitably amending service rules/issuing administrative instructions.

Currently Basic IT training is already scheduled to be provided at every level. However, with the implementation of 'Process improvement' suggestion there will be major and minor changes in every aspects like Guidelines, Procedures, Processes, templates, Work flow etc. considering upcoming changes it is identified during the Training need analysis that following training shall be imparted to all employees:

Subject Area	Frequency of Updation/ Revision	Responsibility	Time line for completion of State-wide Training
Guidelines	Yearly	Subject Matter Experts (SME) And Legal Experts	12 Month*
Process, procedure and templates	Yearly	Subject matter Experts And Legal Experts	12 Month*
Government Orders/legal Framework	Need basis	Legal Experts	12 Month*
Workflow	Need basis	Subject matter Experts (SME)	12 Month*
IT application	Need basis	IT Expert	Need based

Training Plan is for 12 months, 6-9 months of post Go-live training is proposed. Application development and Go-live period is 6 months.

4.1.3.3. Training Materials and Schedule Preparation

Following Training materials are required to be developed for different level of training:

a) Training material for Domain expertise:

- Preparation of Guideline and Procedures, templates
- Question banks
- Automated demos for self-learning
- Test series

b) Training material for IT skill development:

- Preparation of training manuals on basic IT skills
- Preparation of training manuals on IT system modules
- Automated demos for self-learning
- Test series

4.1.4. Technical Document

1. The technical documentation involving detailed instruction for operation and maintenance of the application software. The language of the documentation shall be in English.
2. Such manuals shall include illustrated catalogues, reference manuals, technical manuals and operation manuals for the purpose of operating the solution. Complete documentation of the solution should include:
   - Utilities and general software reference manuals
   - Manuals for every software package including Third Party softwares
   - Computer based trainings and help documentation
3. Any level/version changes, addenda, explanation and/or clarifications in the above mentioned documentation, made during the currency of the Agreement, shall be supplied by the Bidder free of cost, as and when such changes are generally made available.
4. The sets of documents and manuals, supplied and delivered by the proponent shall be in reasonable detail and be current at the time of delivery; be in English language; include system operations, operating system and the Third Party software products; include error recovery instructions; include hardware and software debuggers/diagnostics/listing; include ready reference; and include illustrated parts and catalogues.

4.1.5. Warranty and Maintenance

1. The warranty for the application software shall remain valid for a period of one year from the date of User Acceptance
2. This warranty should also cover adapting the software for any additional requirements that might come to the notice of Govt. of Mizoram at the time of actual use of the software.

4.1.6. Deliverables

Sl No	Deliverables	Time Frame (Elapsed weekly)
1.	**Project plan and Schedule**	**Immediate**
2.	**System Requirement Specification Report**	**T1+ 4 weeks**
4.	**System Design Report**	**T1+ 12 weeks**
5	**Report on Integration Readiness**	**T1+ 16 weeks**
6.	**Testing Strategy Document**	**T1+ 17 weeks**
7.	**User Testing Report**	**T1+ 18 weeks**
8.	**Strategy on Data Entry, Digitization and Migration***	**T1+ 16 Weeks**
9.	**User Training and Change Management Document**	**T1+ 18 weeks**

10.	**Solution Documentation and User Manuals**	**T1 + 18 weeks**
11.	**Software with source codes in two sets of CD ROMS along with source code of third party API/any other software used**	**T1 + 20 weeks**
12.	**Technical Manuals**	**T1 + 22 weeks**

4.2. Scope of Work for Upgradation of MSDC Infrastructure

Supply, Installation, Configuration, Support & Comprehensive Onsite Warranty Support of supplied IT Hardware as per the technical specification at MSDC: The IA shall supply the materials and equipment as required. In case, it is identified that certain components are necessary for required functionality but not included in the Tender BOQ, IA should include such equipment in the bid value, quote for them as "any other item". The IA shall note that the specification provided is the minimum requirement and the IA shall procure better equipment if it is required to meet the service levels mentioned in this RFP.

The Successful Bidder shall install, integrate and commission the active network equipment as well as passive network components (Cabling etc.) as per approved deployment design. All the work shall be done in a conscientious manner as per the OEM guidelines and best industry practices. The system shall be subjected to inspection at various stages. Local regulation / codes shall be followed at all times. The Successful Bidder shall follow all Safety Regulations and practices.

The Successful Bidder shall not cause any damage to the existing data centre, Government buildings /other premises and property and will perform restoration if any damage occurs. Trenches, path-cutting, etc. will be back-filled and restored to the original condition immediately after laying of the conduit/cable. The Successful bidder shall plug conduits and entrance holes where the cabling has been installed with suitable sealing material.

All the software's used for providing data centre services shall be licensed to MSeGS and will be the property of MSeGS. The successful Bidder has to prepare and submit a delivery report including details of all components supplied. The delivery report will be validated by the MSeGS.

4.2.1. Scope of Work for SDC Cloud Enablement

State Data Centres have been equipped with infrastructure which will enable Mizoram State departments with seamless, highly reliable/robust, shared, and secured infrastructure withscalable capacity. For better and optimal utilization of the compute infrastructure and utilizing the same infrastructure amongst multiple applications, adoption of Cloud technology components across MSDC is required. This technology will also drive consolidation of IT resources resulting in power savings which will be a significant step towards adopting green technologies.

To address issues typically faced by different departments at the State, such as long IT infrastructure procurement cycles, underutilization of resources, need for dynamic Scalability, appropriate disaster recovery of applications and data, and for simplifying ITinfrastructure provisioning & availability to the line departments, cloud-based service delivery is needed to be leveraged in the MSDC.

These Cloud solution requirements would include all the necessary components/ modules which are necessary to provide Infrastructure/ Platform as a service to various line departments within the State as a (Private Cloud) to start with and have the capability of moving gradually for Software-as-a-service.

After having analyzed the infrastructure presently provisioned in MSDC and technology advancements required to make them Cloud enabled, following have been considered:

1. Cloud Enablement Infrastructure
    a. Server Virtualization Software with required security capabilities
    b. Cloud Enablement components

i. Self Service provisioning
ii. Automation & Orchestration
iii. Capacity Management
iv. Life Cycle Management
v. Catalogue and directory Maintenance
vi. Monitoring and Reporting

The following are steps for Cloud Implementation:

- Help foster a private cloud-based environment on limited set of servers to begin with while retaining traditional Data Centre hosting models. This will enable the State to get exposure/confidence in building various levels of services that can be broadly classified into following categories:
  a. Infrastructure as a Service (IaaS)
  b. Platform as a Service (PaaS)
  c. Software as a Service (SaaS)
- The services can be initiated with basic Compute Services (CPU, RAM, Storage, OS, and database) to the departments on demand basis along with a test and development environment. Once states develop confidence/maturity in operating cloud enabled environment, gradual migration of existing infrastructure and applications can happen on cloud.

While the Cloud solution is focused primarily on Infrastructure-as-a-Service, other services such as Platform-as-a-Service, Software-as-a-Service (SaaS) to be deployed by the State, are complementary and/or deployed on top of the basic Infrastructure-as-a-Service (IaaS) services and would be based on the maturity of the State.

The solution should be capable of enabling automatic scale-up and scale-down of services hosted in the cloud based on user demand or other factors, should ease infrastructure management, shall be agnostic to the underlying hardware, storage, network, operating system, and hypervisor and shall support open format for virtual machine images. The solution needs to provide the ability for end customers to automatically provision the services via a Web Portal, provide metering and billing to provide service assurance for maintenance & operations activities performed by State teams. Detailed user level or user group level auditing, monitoring, metering, accounting, quota and show-back information is essential for building a platform. Detailed FRS is given in Section IX.

The State is looking for a solution approach and architecture-based design principles from market leading cloud solution providers in providing a low-cost solution enabled through factors such as using commodity hardware and efficient operations to ensure a cost- effective, scalable, efficient e-Governance platform. The architecture needs to be scalable to meet future demand and provide sufficient levels of security and interoperability so that customers (internal and external) are comfortable having critical infrastructure hosted in a safe environment.

4.2.2. Supply, Installation, Testing & Commissioning, Training, Support and Operation and Maintenance for SDC Cloud Enablement Infrastructure

The minimum specified scope of work to be undertaken by the Selected Implementing Agency for supply, installation, Commissioning, testing, training, knowledge transfer, support, Comprehensive

Onsite Warranty Support and Operations and Maintenance of supplied IT Hardware for SDC Cloud Enablement Infrastructure is mentioned below:

a. Finalize the deployment architecture/layout with the State Designated Agency

b. Procurement, supply, installation & commissioning of all the components & sub components including all necessary hardware & software as per the proposed solution. The Bidder has to ensure that the solution shall work as desired and the Bidder is also responsible to supply and install any other components that is inadvertently missed out but required for the overall solution to work, without adding any line item in the Bill of Material.

c. The Bidder shall be responsible for ensuring implementation of the proposed solution with existing infrastructure and solutions present in the SDC and optimal functioning of all the components post installation. This implementation should comply with all the functionalities stated in the Functional Requirement Specifications (FRS) and conform to the agreed deployment/implementation architecture. It shall be noted that any customization / API development that is carried out by the Bidder for such implementation will have to be supported (error correction, patch management) for the same duration of support applicable for the overall solution. The Bidder shall ensure that the Cloud solution should be able to permit utilization of the existing security device like, firewall, IPS such that entire functionality of these devices can be used to monitor security features and provide alerts, alarms, reports, proactive actions on virtual environment similar to those provided in physical environment. The Bidder is also responsible for the existing EMS solution to be able to monitor the performance of Virtual Machines similar to physical works as it is doing for the physical machine, for which the existing DCO will be extending the support. For any further queries, the Bidder can also post queries in the pre- Bid meeting.

MSeGS/ Purchaser has full right to increase or decrease the Scope of Work thereby including or deleting some activities/ items/ infrastructures in the scope of work which is to be mentioned in the Contract / Agreement.

The successful Bidder has to prepare and submit a delivery report including details of all components supplied. The delivery report will be validated by the MSeGS.

The followings are the existing MSDC Infrastructure components:

Table 2: Existing SDC Module

Sl. No.	Asset Name	Qty	Make & Model	Serial No.	Asset Description
MSDC IT Devices					
1	Application Servers	4	Dell M610 Blade Server	2PK6C2S, 3PK6C2S, HNK6C2S, JNK6C2S	Servers for hosting web application
2	Web Servers	4	Dell M610 Blade Server	GNK6C2S, FNK6C2S, 4PK6C2S, 5PK6C2S	Servers for hosting website
3	Database Servers	4	Dell Power Edge R810	2LR6C2S, 3LR6C2S, 3RZ6C2S, 4RZ6C2S	Server used for hosting database
4	Directory Server	2	Dell Power Edge R710	CB0S7R1, GB0S7R1	Server used for domain controller like PDC, BDC
5	Staging Server	2	Dell Power Edge R810	4LR6C2S, JZV6C2S	Server used for testing the application.
6	Management Server	1	Dell Power Edge R710	DYVQ7R1	Server for Mgmt
7	Backup Server	1	Dell Power Edge R710	GTVQ7R1	Server used for backup tools
8	Antivirus Server	1	Dell Power Edge R710	DZVQ7R1	Server used for AV
9	Proxy Server	1	Dell Power Edge R710	DS0S7R1	Server for Proxy
10	EMS Server	3	Dell Power Edge R610	CX0S7R1, J9ZS7R1, H9ZS7R1	Server used for CA monitoring tools

Sl. No.	Asset Name	Qty	Make & Model	Serial No.	Asset Description
11	SAN Storage (SAN Box with Dual Controller And Dual Enclosure)	1	Dell Compellent Series	GWFF9S1, HHZXPQ1, 8ZC9SS1, 7ZC9SS1	
12	Tape Library	1	Dell PowerVault (TM) TL4000	CMQS6Q1	Used to backup over Tape
13	Internet Routers	2	Fortigate 200D	FG200D3916807947, FG200D3916806898	
14	Firewall	2	Fortigate 200D	FG200D3913804505, FG200D3913802452	
15	Core Switches	2	Dell Force 10 (C7004)	81P74S1, 37DM7S1	
16	L3 Switches	6	Dell PowerConnect (TM) 6224 Ethernet Switch	874C7M1,974C7M1,984C7M1,724C7M1,824C7M1,944C7M1	
17	Intrusion Prevention System (IPS)	2	Fortigate 90D	FGT90D3Z13005702, FGT90D3Z13005526	
18	Server Load Balancer	2	Radware AppDirector 1008	31105495, 31104194	
19	SAN Switches	2	Brocade 5100	DODZJN1, HODZJN1	Out of 40 port, it licensed 20 port

Sl. No.	Asset Name	Qty	Make & Model	Serial No.	Asset Description
20	Forti Analyzer	1	Fortigate FAZ 200D	FL200D3A13001663	For log analysis from fortigate devices
21	Blade Chassis	2	Dell Power Edge M1000	DNK6C2S, IPK6C2S	
22	KVM Switch	2	ATEN CS1716i	Z3D3U036XGW0045, Z3D3H036XGT0043	
23	Laptop (Win OS 7 prof)	2	Dell Inspiron 3421	G44HLW1, 644HLW1	1 laptop is faulty
24	Desktop (win7 prof)	5	Dell Inspiron 660S	J04T5Z1, H04T5Z1, G04T5Z1, C04T5Z1, 214T5Z1	Replaced with New Desktop (i3+4th Gen=8GB)
25	MFD Printer	1	HP Laser Jet Pro M400	CND8F9Q8YP	
26	Inkjet Printer and Scanner	1	HP Desk Jet 1510	CN38T19K92	
Software Assets					
1	Backup Software	1 (With 24 client license)	Comvault SIMPANA_9.0	FA09A	

Sl. No.	Asset Name	Qty	Make & Model	Serial No.	Asset Description
2	HIDS	20	Anti-Virus-McAfee EPO _6.0	Grant Number: 11558552-NAI, Account Number: 2267133	
3	EMS Software	7	CA	Site ID-787153	
4	Antivirus Software	100	Anti-Virus-McAfee EPO _6.0	Grant Number: 11558552-NAI, Account Number: 2267133	
5	MS SQL Server 2008 R2 Enterprise Edition	2	Microsoft	7JQ-00257	
7	Microsoft Windows 2008 Server R2 STD/ ENT	14	Microsoft	Not Available	
8	Redhat Enterprise Linux 6.X	9	REDHAT	Contract Number- 10419551	

d. The successful Bidder shall handover working solution to the MSeGS and, thereafter, provide all the necessary support for the project period to the State for operating the solution as per the uptime requirement of the SDC (i.e., 99.749%) The System designed by the Bidder should be in line with the existing SLAs in place

e. MSeGS will appoint a representative from the DCO's team to be associated with the Selected Bidder team so that full hand holding of the entire solution should be done from the beginning, to ensure complete and smooth knowledge transfer

f. Comprehensive training during the transition phase shall be key to successful Operations and Maintenance; hence the Bidder is required to undertake robust training. The successful Bidder is free to propose the training plan. However, at a minimum, the plan should include the following: SDC Cloud Enablement Training Schedule

Table 3: List of SDC Cloud Enablement Training

SDC Cloud Enablement Training	
Sl. No.	**Training Description**
A	**IT Training**
1.	Overview of Components Installed
2.	Server Virtualization
3.	Adherence and Compliance
4.	Overview of Migration from stand-alone Applications to the Virtualized Environment
5.	Overview of Cloud Management and Monitoring Modules
6.	Services that can be leveraged through SDC Private Cloud
7.	Service Provisioning Portal, Orchestration, Automation etc.
8.	Customization of Service Catalogue and Directory to able to add more Services
B	**SLA**
1.	Overview of SLA Monitoring & Management
C	**Others**
1.	Overview of Service Provisioning, security adherence etc.
2.	Do's and Dont's
3.	Any other points/topics (for e.g., Open Format, Interoperability, consolidation, virtualization etc.)

The above plan is only indicative; the final training plan shall be finalized between the Implementing Agency and the MSeGS.

a. A training workshop needs to be arranged by the Implementing Agency for hands-on training.This workshop shall be for 2 weeks and will be delivered by people certified inCloud and Virtualization.
b. One (1) week training would be prior to the FAT and one (1) week after the FAT completion
c. MSeGS, prior to the initiation of the O&M phase, shall undertake a detailed Final Acceptance Test (FAT) process, which will include:

    - Component wise Acceptance
    - Overall Solution Acceptance

    The deliverables for FAT would include, but not limited to, the following:

    - FAT document (including Plan, procedures, and report)
    - Standard Operating Procedures (SOP)
    - Exit Management Plan
    - SLA Measurement Methodology
    - Training material for Training Phase II (i.e., after FAT completion)

    The final deliverables for the project would be decided after discussions with the MSeGS.

d. It is mandated that cloud OEM representatives shall verify for satisfactory deployment of their components by the selected Implementing Agency. Cost for the same shall be inbuilt as part of the bid and no extra payment/ billing request shall be entertained in this regard during the project period. Representatives from the OEM shall also be present during the Final Acceptance Tests.
e. FAT completion would only be considered after at least one application to be decided by MSEGS has been put on the proposed cloud environment after testing all the solution capabilities as part of the FAT parameters.
f. Prior to deployment of the solution, the Implementing Agency shall convey to the MSeGS all the requirements to be fulfilled by MSeGS for ensuring smooth operations. The requirements may include:
    i. Rack Space requirements in the available ‘U’ racks
    ii. Power requirements
    iii. Passive component requirements
    iv. Planned downtime requirements, if any

    (The successful Bidder shall ensure that the planned downtime is during non-peak hours and on weekends, so that the downtime has minimum effect on the existing operations of SDC)
g. The successful Bidder shall ensure that the project documents are maintained as per the existing State policies / ISO 9001-2008 requirements.
h. During the entire project period, the successful Bidder shall comply with the SLAs provided under this RFP
i. All complaints shall be logged in the proposed Cloud Help Desk and the data shall be used to comply with the SLA compliance
j. The call and escalation that would be for the support period shall be properly recorded in the proposed Cloud helpdesk system

k. The Bidder shall ensure that the products quoted are not "end of life" as on Bid Submission date. If in case the support for the product quoted has been stopped/ withdrawn till the time of delivery of equipment, the same will be changed with the superior product at no extra cost. The support including spares, patches, upgrades for the quoted products shall be available for the entire period of the Project without any additional cost to the MSeGS.

l. The Implementing Agency will accomplish preventive and breakdown maintenance activities to ensure that all hardware execute without defect or interruption. If the critical component of the entire configuration is out of service for more than three days, the Implementing Agency shall either immediately replace the defective unit or repair it at its own cost. The Implementing Agency will respond to a site visit and commence repair work on the equipment within 2 working days of being notified of equipment malfunction.

4.2.3. Roles and Responsibilities

The roles of the stakeholders shall change over a period of time as the project will evolve from design to implementation and enter the operations phase. With this background, stakeholders' responsibilities and illustrative organizational structure for the design & implementation phase and operational phase is given below:

SDA	**State Designated Agency**
Cloud SI/ IA	**System Integrator/ Bidder / Implementing Agency**
DCO	**Data Centre Operator**

A- Advise C- Coordinate I – Implement

The table below summarizes the Roles and Responsibilities of stakeholders involved in the project:

Table 4: Summary of Roles and Responsibilities of stakeholders

Sl. No	Activity	Stakeholder		
		SDA	Cloud IA	DCO
1	**Supply, Installation and Commissioning**			
1.1	Finalize Deployment Architecture with SIA	C	I	
1.2	Cloud SI to finalize requirements (Downtime requirements)	C	I	C
1.3	Cloud SI to submit a plan for the following: • Project Implementation, • Training • Knowledge Transfer Plan	C	I	C
	Preparation and submission of Standard Operating Procedures (SOP)	C	I	

Sl. No	Activity	Stakeholder		
		SDA	Cloud IA	DCO
1.4	State to sign off on submitted Plans and give go-ahead to Cloud SI for Installation	I	C	
1.5	Supply, Installation and commissioning of IT Infrastructure components (HW and SW) (active and passive) such as Server Virtualization, Cloud Management and monitoring tools and other IT components required at the State Data Centre as specified in the Functional requirements, and / or suggested by the Cloud SI	C	I	
1.6	State to sign off on Deployment Architecture after taking compliance from Cloud SI for required uptime SLAs	I	C	
1.7	All equipment's (HW, SW, Licenses) shall be verified as per the BoM submitted by the Cloud SI as part of the Bid	I	C	
1.8	State to specify one application to be put in virtualized environment	I	C	C
2	**Testing**			
2.1	Acceptance Test Plan customizationby Cloud SI and submission to State for approval (Focus to be on Performance, Resilience and Quality of solution	I	I	C
2.2	Provide SW, HW, and Licenses required for testing installed Cloud Solution		I	
3	**Final Acceptance Test**			
3.1	Cloud SI to demonstrate all the services / features / functionalities asmentioned in the FRS and defined in the Scope of Work and subsequently in the agreement, as part of the FAT	C	I	C
3.2	State to verify the functionalities and sign-off on FAT completion	I	C	C
4	**Training**			
4.1	State to identify the representatives from MSeGS, User Department,SeMT and SIA.	I		
4.2	Training to be provided by the Bidder as per the training requirements mentioned in the RFP	C	I	C
5	**Support**			

Sl. No	Activity	Stakeholder		
		SDA	Cloud IA	DCO
5.1	Support for all the components (upgrades, updates, call, escalation, response, time, resolution time)	C	I	C
5.2	Maintaining the helpdesk for Cloud components		I	C
5.3	Support during the Operations phase for any error correction or version Updation		I	C
5.4	Provisioning of new VM deletion, Updation, P to V Conversion etc.	C	I	
6.	**Knowledge Transfer**			
6.1	Cloud IA to transfer all relevant knowledge to SDA for cloud O&M, including handholding SDC operation after O&M phase of the project.	C	I	C

Bidder is advised to prepare their integration and passive components requirement based on the table above.

Section – V

Bill of Quantity

Section V. Bill of Quantity

5.1. Bill of Quantity for Upgradation and Cloud Enablement of Mizoram State Data Center

Table 5: BoQ for Upgradation and Cloud Enablement of Mizoram State Data Center with Specifications

IT INFRASTRUCTURE (Hardware Equipment & Software-Licensing)

SL.No.	Item	Quantity	UoM
A	**Compute & Storage Infrastructure**		
1.	Blade Server (Type1)	2	Nos
2.	Blade Server (Type2)	10	Nos
3.	Blade Chassis Solution	1	Lot
4.	Management Server	1	Nos
5.	Backup Server	1	Nos
6.	Enterprise Storage	1	Nos
7.	SAN Switch	2	Nos
8.	Backup Hardware - Disk-based D2D	1	Nos
B	**Network & Security Infrastructure**		
6.	L3 Leaf Switch (Type-1)	2	Nos
6.	L3 Spine Switch	2	Nos
6.	Management Switch	2	Nos
6.	Internet Router	2	Nos
6.	Server Load Balancer	2	Nos
6.	External Firewall (NGF)	2	Nos
C	**Software/License**		
1.	Virtualization with Management	26	CPU
2.	Private Cloud Solution	1	LS
3.	Backup Software	50	VM

SL.No.	Item	Quantity	UoM
4.	Windows Server 2022 Data center - 16 Core License	4	Nos
5.	Windows Server 2022 Standard - 16 Core License	4	Nos
6.	RHEL Server for VDC	8	CPU
7.	RHEL Server for Standard, 1-2 Sockets, with 2 VMs	4	CPU
8.	Host IPS	50	VM
D	**Rack Infrastructure**		
1.	36U Rack (800 x 1200 mm) with 2 Nos of PDU	2	Nos
2.	IP KVM Switch with Console	1	Nos
E	**Installation**		
1.	One Time Installation, Configuration, Migration and Training	1	Lot

Section – VI

Instruction to Bidders

Section VI. Instructions to the Bidders

6.1. Submission of Bids

The bidders should submit bid documents through Mizoram e-Procurement portal at https://mizoramtenders.gov.in/

PART-I: Pre-Qualification Bid.

Pre-qualification bid response documents need to be digitally signed before uploading in the Mizoram e-Procurement Portal. All documents to be uploaded for Pre-qualification as per section III are free-format. For all the free-format documents, Bidder is expected to scan the relevant documents into PDF format (in 100 dpi scan resolution).

PART-II: Technical Bid

Technical bid response documents as per Section XI need to be digitally signed before uploading in the Mizoram e-Procurement portal. Complete technical details, data sheet, MAF and detail technical specification for the item offered and any other relevant documents.

PART-III: Financial Bid

Financial bid response documents need to be digitally signed before uploading in the said portal. Complete financial details as per specified format. Financial Bid will be considered for evaluation for those Bidders who are qualified in the Part-II.

6.2. Opening of Bids

The Technical Evaluation Committee will open and evaluate the pre-qualification bid and technical bid whereas the Financial Evaluation Committee will open and evaluate the Financial Bid at the place and time mentioned at important information sheet. During the Bid opening, the interested bidders (Maximum 2) are allowed to participate.

6.3. Evaluation Criteria

Part I: Pre-Qualification criteria

The responsive Bidders will be evaluated based on Section III (Bidder's Eligibility) of RFP and would be evaluated by Technical Evaluation Committee. Bidders should be ready to give any clarification asked by the evaluation committee. If Bidder does not fulfil all the conditions mentioned in the bidder's eligibility, his technical bid will not be considered for further evaluation.

Part II: Opening and Evaluation of Technical Bids

The Technical Evaluation Committee would evaluate the technical bids. Bidders should be ready to reply to all the queries raised by the technical evaluation committee. The primary function of clarifications in the evaluation process is to clarify ambiguities and uncertainties arising out of the evaluation of the bid documents. To facilitate the Technical Bid evaluation, the technical criteria laid down along with the assigned weights have been presented in **Section XI.**

Bidders securing a minimum of 70% marks in the technical evaluation will only be considered for further financial bid evaluation. Bids which don't secure the minimum specified technical score

will be considered technically non-responsive and hence debarred from being considered from financial evaluation. Scores of technically qualified Bidders shall be weighed on a scale of 70% and shall be carried forward for evaluation together with the scores of financial evaluation.

Part III: Opening and Evaluation of Financial Bids

1. The Commercial Bids of technically qualified bidders (i.e. above 70% marks) will be opened on the prescribed date in the presence of bidder representatives.
2. The commercial scores will be calculated as

   Fn = Fmin / Fb * 100

   where,

   Fn = Normalized financial score of the bidder under consideration

   Fb = Evaluated cost for the bidder under consideration

   Fmin = Minimum evaluated cost by any bidder
3. Only fixed price financial bids indicating total price for all the deliverables and services specified in this bid document will be considered.
4. The bid price will include all taxes and levies and shall be in Indian Rupees and mentioned separately.
5. Any conditional bid would be rejected.
6. **Errors & Rectification:** Arithmetical errors will be rectified on the following basis: "If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected. If there is a discrepancy between words and figures, the amount in words will prevail".
7. If there is no price quoted for certain material or service, the bid shall be declared as disqualified.
8. In the event that there are 2 or more bidders having the same value in the financial bid, the bidder securing the highest technical score will be adjudicated as the "Best responsive bid" for award of the contract.

Evaluation of Final Bids

Final Evaluation of the overall score will be calculated as follows: -

Bn=0.70 * Tn + 0.30 * Fn

where,

Bn = overall score of bidder under consideration
Tn = Technical score for the bidder under consideration
Fn = Normalized financial score of the bidder under consideration

MSeGS reserves the right to negotiate with the Bidder whose proposal has been ranked first on the basis of best value.

6.4. Authentication of Bid

The response bid shall be signed by the Bidder or a person or persons duly authorized to bind the Bidder to the Contract. A letter of authorization shall be supported by a written Power-of-Attorney accompanying the bid. All pages of the bid, except for unamended printed literature, shall be initialled and stamped by the person or persons signing the bid.

6.5. Bid Prices

- The Bidder shall indicate price in the prescribed format, the unit rates and total bid prices of the equipment / services, it proposes to provide under the Contract. Prices shall be shown separately for each item as detailed in the Tender Document. In absence of the above information as requested, the Bid may be considered incomplete and hence rejected. The price components furnished by the Bidder in accordance with format below will be solely for the purpose of facilitating the comparison of Bids by MSeGS and will not in any way limit State's right to contract on any of the terms offered.
- The Bidder shall prepare the Bid based on details provided in the Tender Document. It must be clearly understood that the scope of work is intended to give the Bidder an idea about the order and magnitude of the work and is not in any way exhaustive and guaranteed by MSeGS. The Bidder shall carry out all the tasks in accordance with the requirement of the Tender Document & due diligence and it shall be the responsibility of the Bidder to fully meet all the requirements of the Tender Document. If during the course of the execution of the project, any revisions to the work requirements like technical specifications, equipment sizing etc. are to be made to meet the goals of the State, all such changes shall be carried out within the current price.

6.6. Firm Prices

- Prices quoted in the Bid must be firm and final and shall not be subject to any upward modifications on any account whatsoever. However, MSeGS reserves the right to negotiate the prices quoted in the Bid to effect downward modification.
- The Commercial Bid shall clearly indicate the price to be charged without any qualifications whatsoever and shall include all taxes, duties, fees, levies, works contract tax and other charges as may be applicable in relation to the activities proposed to be carried out. It is mandatory that such charges wherever applicable/payable shall be indicated separately in:

  Annexure XII: Format for Response to the tender: Commercial Bid

  However, shall there be a change in the applicable taxes Mizoram State e-Governance Society (MSeGS) reserves the right to negotiate with the Bidder.
- Prices, in any form or by any reason, shall not be revealed before opening of the Commercial Bid, failing which the offer shall be liable to be rejected. If price change is envisaged due to any clarification, revised Bid in a separate sealed cover shall be submitted with prior written permission of the MSeGS.

6.7. Bid Currency

Prices for services offered shall be quoted in Indian National Rupees (INR) only.

6.8. Bid Security (Earnest Money Deposit)

1. All Bidder's shall deposit, as part of its Bid, an Earnest Money amounting to **₹ 15,00,000 (Rupees Fifteen Lakhs)** only. Bids without this bid security will be rejected.
2. The Bid Security shall be in Indian Rupees and shall be in the form of Demand Draft/Pay Order, issued by any nationalized bank in India, drawn in favour of Mizoram State e-Governance society payable at Aizawl, and shall be valid for at least 180 days. Such negotiable instrument should be valid for at least sixty (60) days beyond the validity of the Bid.
3. Unsuccessful bidder's Bid security will be discharged or returned within sixty (60) days after the expiration of the period of Bid validity prescribed.

6.9. Forfeiture of BID Security

The Bid security may be forfeited either in full or in part, at the discretion of MSeGS, on account of one or more of the following reasons:

1. If the bidder withdraws his Bid during the period of Bid validity specified by him on the Bid Letter Form;
2. If the bidder fails to co-operate in the Bid evaluation process
3. If the bid or its submission is not in conformity with the instruction mentioned herein
4. If the bidder violates any of the provisions of the terms and conditions of the tender

In case, a successful bidder fails to (a) accept award of work, (b) sign the Contract Agreement with MSeGS, within the stipulated time after acceptance of communication on placement of award, (c) furnish Performance Bank Guarantee, (d) fails to sign the Contract Agreement in time, (e) or the bidder violates any of such important conditions of this tender document or indulges in any such activities as would jeopardize the interest of MSeGS in timely finalization of this tender. The decision of MSeGS regarding forfeiture of bid security shall be final and shall not be called upon question under any circumstances. A default of such type or nature may involve black-listing of the bidder by MSeGS/Govt. of Mizoram.

6.10 Bid Validity Period

Period of Validity of Bids

Bids shall remain valid for 180 days after the date of opening of Technical Bids prescribed by MSeGS. A Bid valid for a shorter period may be rejected as non-responsive. However, the prices finalized after opening the tenders shall not increase throughout the period of implementation and operation. The prices of components quoted in the Financial Bid by the Bidder shall remain valid for the project period

Extension of Period of Validity

In exceptional circumstances, MSeGS may request the Bidder(s) for an extension of the period of validity. The request and the responses thereto shall be made in writing or by email/Fax. The validity of EMD shall also be suitably extended.

6.10. Notification of Award

Notification to Bidder

Before the expiry of the period of validity of the proposal, MSeGS shall notify the successful bidder in writing by registered letter or by fax/email, that its bid has been accepted. The Bidder shall acknowledge in writing receipt of the notification of selection and shall send his acceptance to enter into agreement within fourteen (14) days of receiving the notification.

Signing of Contract

The notification of the Selection shall constitute signing of the agreement. The signing of agreement will amount to award of contract and bidder will initiate the execution of the work as specified in the agreement. At the same time as MSeGS notifies the successful Bidder that its Bid has been accepted, and MSeGS will send the Bidders the Proforma for Contract incorporating all agreements between the parties. Within 14 days of receipt of the Contract, the successful Bidder shall sign with date the Contract and return it to MSeGS.

Discharge of Bid Security

Upon the successful signing of the agreement, MSeGS shall promptly request the Bidder to provide Performance Bank Guarantee. On receipt of the performance guarantee, the Bid security of the selected Bidders will be released.

6.11. Failure to Abide by the Agreement

The conditions stipulated in the agreement shall be strictly adhered to and violation of any of the conditions will entail termination of the contract without prejudice to the rights of State with such penalties as specified in the Bidding document and the Agreement.

6.12. Performance Bank Guarantee

Within 14 (fourteen) days after the date of receipt of notification of the acceptance of Letter of Acceptance, the company shall furnish Performance Bank Guarantee as per Section XIII Annexure - 1 to MSeGS @ 10 % of the total value of work order by way of irrevocable and unconditional Bank Guarantee in favour of MSeGS for a period to be specified in the award of work. This Bank Guarantee should be of a sufficient duration to cover the risk of MSeGS. The proceeds of the Performance Bank Guarantee shall be payable to MSeGS as compensation for any loss resulting from the Company's failure to fulfil its obligations under the terms and conditions of the Work Order.

The Performance Bank Guarantee regarding commencement of job / task will be discharged by MSeGS and returned to the company not later than 30 (Thirty) days following the date of completion of the company's performance, related obligations under the terms & conditions of the Work Order.

6.13. Contacting MSeGS

1. Bidder shall not approach MSeGS officials beyond office hour and/ or outside MSeGS office premises, from the time of the Bid opening to the time of finalization of successful Bidder.
2. Any effort by a Bidder to influence MSeGS officials in the decisions on Bid evaluation, Bid comparison or finalization may result in rejection of the Bidder's offer. If the Bidder wishes to bring additional information to the notice of the MSeGS, it should do so in writing.

6.14. MSeGS Right to Accept Bid and to Reject any or all Bids

1. Prior to expiration of the period of Bid validity, MSeGS will notify the successful Bidder in writing that its Bid has been accepted.
2. Within 7 days of receipt of such intimation, successful Bidder shall give its acceptance to MSeGS.
3. Upon the successful Bidder's furnishing of Performance Bank Guarantee, MSeGS will promptly notify all unsuccessful Bidders and will discharge their Bid security.
4. Effort will be made by the MSeGS to sign an agreement with the successful Bidder within 15 days.
5. MSeGS will have the right to accept bid and to reject any or all bids.

6.15. Rejection Criteria

Besides other conditions and terms highlighted in the tender document, Bids may be rejected under following circumstances:

Pre-Qualification Rejection Criteria

- Bids submitted without or with improper EMD.
- Bids which do not conform to unconditional validity of the Bid as prescribed in the Tender.
- Pre-Qualification Bid containing commercial details.
- If the information provided by the Bidder is found to be incorrect / misleading at any stage / time during the Tendering Process.
- Any effort on the part of a Bidder to influence the Bid evaluation, Bid comparison or contract award decisions.
- Bids without signature of person (s) duly authorized on required pages of the Bid
- Bids without power of authorization and any other document consisting of adequate proof of the ability of the signatory to bind the Bidder.
- Failure to furnish proofs for information provided

Technical Rejection Criteria

- Technical Bid containing commercial details.
- Revelation of Prices in any form or by any reason before opening the Financial Bid.

- Failure to furnish all information required by the RFP Document or submission of a Bid not substantially responsive to the Tender Document in every respect.
- Failure to furnish proofs for information provided
- Bidders not quoting for the complete scope of Work as indicated in the Tender documents, addendum (if any) and any subsequent information given to the Bidder.
- Bidders not complying with the Technical and General Terms and conditions as stated in the RFP Documents.
- The Bidder not conforming to unconditional acceptance of full responsibility of providing services in accordance with the Scope of work and Service Level Agreements of this tender.
- If the Bid does not confirm to the timelines indicated in the Bid.

Commercial Rejection Criteria

- Incomplete Price Bid
- Price Bids that do not conform to the Tender's price Bid format.
- Total price quoted by the Bidder does not include all statutory taxes and levies applicable.

6.16. Concessions permissible under statutes

Bidder, while quoting against this tender, must take cognizance of all concessions permissible under the statutes including the benefit under the GST, failing which it will have to bear extra cost where Bidder does not avail concessional rates of levies like customs duty, excise duty, sales tax, etc. MSeGS will not take any responsibility towards this. However, MSeGS may provide necessary assistance, wherever possible, in this regard.

6.17. Taxes and Duties

All the taxes, duties, levies and all other charges applicable and shall be valid for delivery on FOR basis to the designated delivery points. All payments will be subjected to tax deduction at source as applicable/required at the prevailing tax rates.

Govt. of Mizoram / MSeGS shall not pay any increase in duties, taxes and surcharges and other charges on account of any revision, enactment during the period of validity of the Bids and also during the contract period. The decision of MSeGS in this regard will be final and binding and no disputes in this regard will be entertained.

The Bidder will have to bear all Income Tax liability both corporate and personal tax.

6.18. Lack of Information to Bidder

The Bidder shall be deemed to have carefully examined RFP document to his entire satisfaction. Any lack of information shall not in any way relieve the Bidder of his responsibility to fulfil his obligation under the bid.

6.19. Fraudulent & Corrupt Practice

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

"**Corrupt Practice**" means the offering, giving, receiving or soliciting of anything of value, pressurizing to influence the action of a public official in the process of project execution. MSeGS will reject a proposal for award if it determines that the bidder recommended for award has engaged in corrupt or fraudulent practices in competing for, or in executing, the project.

Section – VII

General Condition of Contract

Section VII.General Condition of Contract

8.1 Definitions

In this Contract, the following terms shall be interpreted as indicated:

- "**Bidder**" shall mean an Individual Company registered under the Companies Act 1956 or as defined in this document that participates in the Bidding process
- "**State**" shall mean State Government, India and shall include its legal representatives, successors and permitted assignees
- "**MSeGS's Representative**" shall mean the person appointed by MSeGS from time to time to act on its behalf at the site for overall coordination, supervision and project management at site
- **"Business Day"** means any day that is not a Saturday, Sunday or a public holiday (as per the official holidays observed by the State
- The **"Successful Bidder / System Integrator (SI) / Implementing Agency (IA)"** means the company with whom the order has been placed for providing Services as specified in this tender/contract and shall be deemed to include the Implementation Agency's successors, representatives (approved by the State), heirs, executors, administrators and permitted assigns, as the case may be, unless excluded by the terms of the contract
- **"SI / Implementing Agency's Representative"** means the person or the persons appointed by the IA from time to time to act on its behalf for overall co-ordination, supervision and project management. This definition shall also include any and/or all of the employees of Bidder, their authorized agents and representatives and other personnel employed or engaged either directly or indirectly by the IA for the purposes of the Contract
- **"Contract"** means the Agreement entered into between the State and the "Implementing Agency/ SI" as recorded in the Contract form signed by the State and the "Implementing Agency/ SI" including all attachments and Annexes thereto, the Tender and all Annexes thereto and the agreed terms as set out in the Bid, all documents incorporated by reference therein and amendments and modifications to the above from time to time
- **"Commissioning of Cloud Enablement components"** means the Supply, Installation, Testing, Training, Configuration and Final Acceptance of Cloud Enablement components
- **"Confidential Information"** means any information disclosed to or by any Party to this Contract and includes any information in relation to the Parties, a third party or any information with regard to any taxpayer, or any other person who is covered within the ambit of any commercial taxes legislation including any such information that may come to the knowledge of the Parties hereto / Bidder's Team by virtue of this Contract that:
    - By its nature or by the circumstances in which it is disclosed is confidential; or
    - Is designated by the disclosing Party as confidential or identified in terms connoting its confidentiality; but does not include information which is or becomes public knowledge other than by a breach of this Contract

- **"Document"** means any embodiment of any text or image however recorded and includes any data, text, images, sound, voice, codes or and databases or microfilm or computer-generated micro fiche
- **"Effective Date"** means the date on which the Contract is signed and executed by the parties hereto. If the Contract is executed in parts, then the date on which the last of such Contracts is executed shall be construed to be the Effective Date
- **"Intellectual Property Rights"** means any patent, copyright, trademark, trade name, design, trade secret, permit, service marks, brands, propriety information, knowledge, technology, licenses, databases, computer programs, software, know how or other form of intellectual property right, title, benefits or interest whether arising before or after the execution of this Contract and the right to ownership and registration of these rights
- **"Kick Off Meeting"** means a meeting convened by the MSeGS to discuss and finalize the work execution plan and procedures with Implementation Agency
- **"Parties"** means the MSeGS and the IA and **"Party"** means either of the Parties
- "**Service**" means facilities/services to be provided as per the requirements specified in this tender document and any other incidental services, such as installation, implementation, support and provision of technical assistance and other such obligations of the IA covered under the Contract
- **"The Contract Price/Value**" means the price payable to the IA under the Contract for the full and proper performance of its contractual obligations

7.2 Interpretation

In this Contract, unless a contrary intention is evident:

- The "clause" headings are meant for convenient reference only and do not form part of this Contract;
- Unless otherwise specified a reference to a clause number is a reference to all of its sub-clauses;
- 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;
- A word in the singular includes the plural and a word in the plural includes the singular;
- A word importing a gender includes any other gender;
- A reference to a person includes a partnership and a body corporate;
- A reference to legislation includes legislation repealing, replacing or amending that legislation;
- 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.
- In the event of an inconsistency between the terms of the Contract and the Tender and the Bid, the terms of the contract shall prevail.

7.3 Representations & Warranties

In order to induce MSeGS to enter into the Contract, the IA hereby represents and warrants as of the date hereof, whose representations and warranties shall survive the term and termination of the contract for each of the following:

- That the IA has the requisite experience in supply, installation, configuration, training and testing and Final Acceptance Test of the Cloud Enablement components, support, the technical know-how and the financial wherewithal, the power and the authority that would be required to successfully provide the services sought by MSeGS for the purposes of the Contract.
- That the IA is not involved in any major litigation or legal proceedings, pending, existing and potential or threatened that may have an impact of affecting or compromising the performance or delivery of services under the Contract.
- That the representations and warranties made by the IA in the Bid or will be made in the contract are and shall continue to remain true and fulfil all the requirements as are necessary for executing the obligations and responsibilities as laid down in the Contract and the Tender and unless MSeGS specifies to the contrary, the IA shall be bound by all the terms of the Bid and the contract through the term of the contract.
- That the IA has the professional skills, personnel and resources/authorizations that are necessary for providing all such services as are necessary to fulfil the scope of work stipulated in the Tender and the Contract.
- That there shall not be any privilege, claim or assertion made by a 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.
- That the IA shall use such assets of MSeGS as MSeGS may permit for the sole purpose of execution of its obligations under the terms of the Bid, Tender or the Contract. The IA shall however have no claim to any right, title, lien or other interest in any such property and any possession of property for any duration whatsoever shall not create any right in equity or otherwise merely by fact of such use or possession during or after the term hereof.
- That the IA shall procure all the necessary permissions and adequate approvals and licenses for use of various software and any copyrighted process/product free from all claims, titles, interests and liens thereon and shall keep MSeGS indemnified in relation thereto.
- That the execution of the Services and the Scope of work herein are and shall be in accordance and in compliance with all applicable laws.
- That neither the execution and delivery by the IA of the Contract nor the Implementing Agency's compliance with or performance of the terms and provisions of the Contract

  (i) will contravene any provision of any Applicable Law or any order, writ, injunction or decree of any court or Governmental Authority binding on the Implementing Agency,

  (ii) will conflict or be inconsistent with or result in any breach of any or the terms, covenants, conditions or provisions of, or constitute a default under any Contract,

Contract or instrument to which the IA is a party or by which it or any of its property or assets is bound or to which it may be subject or

(iii) will violate any provision of the Memorandum and Articles of Association of the Implementing Agency.

- That the IA certifies that all registrations, recordings, filings and notarizations of the Contract and all payments of any tax or duty, including without limitation stamp duty, registration charges or similar amounts which are required to be affected or made by the IA which is necessary to ensure the legality, validity, enforceability or admissibility in evidence of the Contract have been made.

- That the IA owns, has license to use or otherwise has the right to use, free of any pending or threatened liens or other security or other interests all its Intellectual Property Rights, which are required or desirable for performance of its services under this contract and regarding the same the IA does not, so far as the IA is aware, in carrying on its business and operations, infringe any Intellectual Property Rights of any person. So far as the IA is aware, none of the Intellectual Property Rights, owned or enjoyed by the IA or which the IA is licensed to use, which are material in the context of Implementing Agency's business and operations for the performance of this contract are being infringed nor, so far as the IA is aware, is there any infringement or threatened infringement of those Intellectual Property Rights licensed or provided to the IA by any person. All Intellectual Property Rights (owned by the IA or which the IA is licensed to use) required by the IA for the performance of the contract are valid and subsisting. All actions (including registration, payment of all registration and renewal fees) required to maintain the same in full force and effect have been taken thereon and shall keep the IA indemnified in relation thereto.

- That time is the essence of the Contract and hence the IA shall at all times maintain sufficient manpower, resources, and facilities, to provide the Services in a workmanlike manner on a timely basis.

- That its security measures, policies and procedures are adequate to protect and maintain the confidentiality of the Confidential Information.

- That in providing the Services or deliverables or materials, neither IA nor its agent, nor any of its employees, shall utilize information which may be considered confidential information of or proprietary to any prior employer or any other person or entity.

7.4 Duration of the Contract

The Contract shall remain valid for one (1) year from the date of issue of Work Order by MSeGS.

7.5 Implementation Agency's Obligations

- The IA would be required to design, develop, test and deploy the application and supply, install, configure and test the Upgraded MSDC components and Cloud Enablement components. It will be the IA's responsibility to ensure compliance to the requirements of the Cloud Enablement components and continued support of the Cloud Enablement component in accordance with and in strict adherence to the terms of this SLA, Scope of work, Functional Requirement Specification (FRS) and the Terms and Conditions of this Contract

- In addition to the aforementioned, the IA shall:
    - Perform the services specified by MSeGS and make available the necessary equipment/ facilities / services as may be necessary and other 'Scope of work' requirements as specified in the tender and changes thereof
    - The IA shall ensure that it's Team is competent, professional and possesses the requisite qualifications and experience appropriate to the task they are required to perform under this Contract. The IA shall ensure that the Services are performed through the efforts of the Implementing Agency's Team, in accordance with the terms hereof and to the satisfaction of MSeGS. Nothing in this Contract relieves the IA from its liabilities or obligations under this Contract to provide the Services in accordance with MSeGS directions and requirements and as stated in this Contract and the Bid to the extent accepted by MSeGS and the IA shall be liable for any non-performance, non-compliance, breach or other loss and damage resulting either directly or indirectly by or on account of its Team
    - The Implementing Agency's representative shall have all the powers requisite for the performance of services under this contract. The Implementing Agency's Representative shall liaise with MSeGS's Representative for the proper coordination and timely completion of the works and on any other matters pertaining to the works. He will extend full co-operation to MSeGS's representative in the manner required by them for supervision/ inspection/ observation of the Cloud Enablement components, equipment/material, procedures, performance, reports and records pertaining to the works. He shall also have complete charge of the IA's personnel engaged in the performance of the works and to ensure internal discipline, compliance of rules, regulations and safety practice. He shall also co-ordinate and co-operate with the other Service Providers/Vendors of the State Departments working at the Site/offsite for activities related to planning, execution of scope of work and providing services under this contract.

Reporting Progress:

- IA shall monitor progress of all the activities specified in the contract and submit monthly / fortnightly progress report about various aspect of the work to MSeGS. The report shall be submitted in soft copy as well. Formats for such reporting shall be discussed at the Kick-Off meeting.

- The IA shall reply to the written notice giving details of the measures he proposes to take to expedite the progress so as to complete the works by the prescribed time. The IA shall not be entitled to any additional payment for taking such steps. If at any time it shall appear to MSeGS or MSeGS's Representative that the actual progress of work does not conform to the approved programme the IA shall produce at the request of the MSeGS's Representative a revised programme showing the modification to the approved programme necessary to ensure completion of the works within the time for completion or steps initiated to ensure compliance/improvement to the stipulated requirements

7.6 Implementing Agency's Team

- The IA shall supply to MSeGS, 5 (five) days after the signing of the contract or effective date of commencement of works/services or kick-off meeting whichever is earlier, an organization chart showing the proposed organization/manpower to be established by the IA for execution of the work/facilities including the identities and Curriculum-Vitae of the key personnel to be deployed. The IA shall promptly inform MSeGS in writing of any revision or alteration of such organization charts
- The IA shall be responsible for the deployment, transportation, accommodation and other requirements of all its employees required for the execution of the work and for all costs/charges in connection thereof
- The IA shall provide and deploy manpower on the site for carrying out the work, only those manpower resources who are skilled and experienced in their respective trades and who are competent to execute or manage/supervise the work in a proper and timely manner.
- The MSeGS's Representative may at any time object to and require the IA to remove forthwith from the site a supervisor or any other authorized representative or employee of the IA or any person(s) deployed by IA, if in the opinion of the MSeGS's Representative the person in question has misconducted himself or his deployment is otherwise considered undesirable by the MSeGS's Representative the IA shall forthwith remove and shall not again deploy the person in question of the work site without the written consent of the MSeGS's Representative
- The MSeGS's Representative may at any time request the IA to remove from the work / Site the IA's supervisor or any other authorized representative including any employee of the IA or any person(s) deployed by IA for professional incompetence or negligence or for being deployed for work for which he is not suited. The IA shall consider the representative's request and may accede to or disregard it. The MSeGS's Representative having made a request as aforesaid in the case of any person which the IA has disregarded, may in the case of the same person at any time but on a different occasion and for a different instance of one of the reasons referred to above in this Clause object to and require the IA to remove that person from deployment on the work which the IA shall then forthwith do and shall not again deploy any person so objected to on the work or on the sort of work in question (as the case may be) without the written consent of the MSeGS's Representative
- The MSeGS's Representative shall state to the IA in writing his reasons for any request or requirement pursuant to this clause
- The IA shall maintain backup personnel and shall promptly provide replacement of every person removed pursuant to this section with an equally competent substitute from the pool of backup personnel
- In case of change in its team composition owing to attrition the IA shall ensure a reasonable amount of time-overlap in activities to ensure proper knowledge transfer and handover/takeover of documents and other relevant materials between the outgoing and the new member. The exiting team member shall be replaced with an equally competent substitute from the pool of backup personnel.

7.7 Statutory Requirements

- During the tenure of this Contract nothing shall be done by the IA in contravention of any law, act and/ or rules/regulations, there under or any amendment thereof governing inter-alia customs, stowaways, foreign exchange etc. and shall keep State indemnified in this regard
- The IA and their personnel/representative shall not alter / change / replace any hardware component proprietary of MSeGS and/or under warranty or AMC of third party without prior consent of MSeGS.
- The IA and their personnel/representative shall not, without consent of MSeGS, install any hardware or software not purchased / owned by MSeGS.

7.8 Contract Administration

- Either party may appoint any individual / organization as their authorized representative through a written notice to the other party. Each representative shall have the authority to:
    - Exercise all of the powers and functions of his/her Party under this Contract other than the power to amend this Contract and ensure the proper administration and performance of the terms hereof and
    - Bind his or her Party in relation to any matter arising out of or in connection with this Contract
- The IA shall be bound by all undertakings and representations made by the authorized representative of the IA and any covenants stipulated hereunder with respect to this Contract for and on their behalf
- For the purpose of execution or performance of the obligations under this Contract the MSeGS's Representative would act as an interface with the nominated representative of the IA. The IA shall comply with any instructions that are given by the MSeGS's Representative during the course of this Contract in relation to the performance of its obligations under the terms of this Contract and the Tender
- A Committee comprising representatives from the MSeGS and the IA shall meet on a quarterly basis to discuss any issues / bottlenecks being encountered. The IA shall draw the minutes of these meetings and circulate to the stakeholders.

7.9 Right of Monitoring, Inspection and Periodic Audit

- MSeGS reserves the right to inspect by itself or through a Third-Party agency and monitor/assess the progress / performance/ maintenance of the MSDC Cloud Enablement components at any time during the course of the Contract, after providing due notice to the IA. MSeGS may demand any document, data, material or any other information which it may require to enable it to assess the progress of the project.
- MSeGS shall also have the right to conduct, either itself or through another Third Party as it may deem fit, an audit to monitor the performance by the Third Party of its obligations/functions in accordance with the standards committed to or required by MSeGS. The IA undertakes to cooperate with and provide to MSeGS / any other Agency appointed by MSeGS, all documents and other details as may be required by them for this purpose. Any

deviations or contravention identified as a result of such audit/assessment would need to be rectified by the IA failing which MSeGS may without prejudice to any other rights that it may have issue a notice of default.

7.10 Obligation of MSeGS

- The MSeGS's Representative shall interface with the IA to provide the required information, clarifications, and to resolve any issue as may arise during the execution of the Contract. MSeGS shall provide adequate cooperation in providing details assisting with coordinating and obtaining of approvals from various governmental agencies, in cases, where the intervention of the MSeGS is proper and necessary.
- MSeGS shall ensure that timely approval is provided to the IA, where deemed necessary, which shall include physical data centre diagram/plans and all specifications related to equipment/material required to be provided as part of the Scope of Work.
- The MSeGS shall approve all such documents as per the above Clause.

7.11 Information Security

- The IA shall not carry and/or transmit any material, information, layouts, diagrams, storage media or any other goods/material in physical or electronic form, which are proprietary to or owned by the MSeGS/State, out of Mizoram State Data Centre premises without prior written permission from MSeGS.
- The IA shall adhere to the Information Security policy developed by the Government of Mizoram.
- IA acknowledges that State business data and other State proprietary information or materials, whether developed by State or being used by State pursuant to a license agreement with a third party (the foregoing collectively referred to herein as "proprietary information") are confidential and proprietary to State and IA agrees to use reasonable care to safeguard the proprietary information and to prevent the unauthorized use or disclosure thereof, which care shall not be less than that used by IA to protect its own proprietary information. IA recognizes that the goodwill of State depends, among other things, upon IA keeping such proprietary information confidential and that unauthorized disclosure of the same by IA could damage State and that by reason of IA's duties hereunder. IA may come into possession of such proprietary information even though IA does not take any direct part in or furnish the services performed for the creation of said proprietary information and shall limit access thereto to employees with a need to such access to perform the services required by this agreement. IA shall use such information only for the purpose of performing the said services.
- IA shall, upon termination of this agreement for any reason or upon demand by MSeGS, whichever is earlier return any and all information provided to IA by MSeGS including any copies or reproductions, both hard copy and electronic.

7.12 Ownership of Equipment

MSeGS shall own all the equipment, Licenses and any solution supplied by the IA arising out of or in connection with this Contract.

7.13 Risk Management

IA shall at his own expense adopt suitable Risk Management methodology to mitigate all risks assumed by the IA under this Contract. IA shall underwrite all the risk related to its personnel deputed under this Contract as well as equipment and components of the SDC, procured for the MSDC, equipment, tools and any other belongings of the IA or their personnel during the entire period of their engagement in connection with this Contract and take all essential steps to reduce and mitigate the risk. State Government will have no liability on this account.

7.14 Indemnity

- The IA shall execute and furnish to MSeGS a Deed of Indemnity in favour of the State in a form and manner acceptable to the State, indemnifying the State 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:
    - Any negligence or wrongful act or omission by the IA or the Implementing Agency's Team / or any third party in connection with or incidental to this Contract; or
    - A breach of any of the terms of the Implementing Agency's Bid as agreed, the Tender and this Contract by the Implementing Agency, the Implementing Agency's Team or any third party.
- The indemnity shall be to the extent of 100% in favour of the MSeGS.

7.15 Confidentiality

- The IA shall not use any Information, name or the logo of MSeGS except for the purposes of providing the Service as specified under this contract.
- The IA may only disclose Information with the prior written consent of the MSeGS to a member of the IA's Team ("Authorized Person") if the Authorized Person is obliged to use it only for the performance of obligations under this contract.
- The IA shall do everything reasonably possible to preserve the confidentiality of the Information including execution of a confidentiality agreement to the satisfaction of MSeGS.
- The IA shall sign a Non-Disclosure Agreement (NDA) with MSeGS. The Implementing Agency, its antecedents shall be bound by the NDA. The IA will be held responsible for any breach of the NDA by its antecedents or delegates.
- The IA shall notify MSeGS promptly if it is aware of any disclosure of the Information otherwise than as permitted by this Contract or with the authority of the State.
- The IA shall be liable to fully recompense MSeGS for any loss arising from breach of confidentiality. The MSeGS reserves the right to adopt legal proceedings, civil or criminal, against the IA in relation to a dispute arising out of breach of obligation by the IA under this clause.
- The IA shall not take away or remove in whatever manner any information on any media like but not limited to Digital Drives, CDs. DVDs, email etc. from SDC without the specific

written permission of MSeGS. IA, if required, shall take specific permission for each such event.

- The IA shall not use any information which might have come to its knowledge in whatever manner during the discharge of its obligation under the contract for any purpose except strictly for discharging his obligation under the contract and no more.

7.16 Term and Extension of the Contract

- The term of this Contract shall be for a period as indicated in the contract and contract shall come to an end on expiry of such period except when its term is extended by MSeGS.

- MSeGS shall reserve the sole right to grant any extension to the term mentioned above on mutual agreement including fresh negotiations on terms and conditions.

7.17 Prices

Prices quoted must be firm and shall not be subject to any upward revision on any account whatsoever throughout the period of contract for the scope of the Contract subject to Change Order provisions. The Bidder will ensure that prices/ cost for all the software licenses discovered during the Bid process will be valid for the entire period of contract and without any additional Operational and Maintenance charges for the same."

7.18 Change Orders/Alteration/Variation

The IA agrees that the requirements given in Functional Requirement Specifications (FRS) of this RFP are minimum requirements and are in no way exhaustive and guaranteed by MSeGS. It shall be the responsibility of the IA to meet all the requirements upward revisions and/or additions of quantities, specifications, sizes given in Specifications etc. required to be made during commissioning of Cloud Enablement components shall not constitute a change order and shall be carried out without a change order and shall be carried out without any time and cost effect to MSeGS. Any upward revision and/or additions consequent to errors, omissions, ambiguities, discrepancies in the specification which the IA had not brought out to the MSeGS notice in his tender shall not constitute a change order and such upward revisions and/or addition shall be carried out by IA without any time and cost effect to MSeGS.

Change Order

- The change order will be initiated only in case-
  i. MSeGS directs in writing the IA to include or any addition to the Scope of Work covered under this Contract or delete . reduce any part of the scope of the work under the Contract.
  ii. IA requests to delete any part of the work which will not adversely affect the operational capabilities of the facilities and if the deletions proposed are agreed to by MSeGS and for which cost and time benefits shall be passed on to MSeGS.
  iii. MSeGS directs in writing the IA to incorporate changes or additions to the Design Criteria requirements already covered in the Contract.

- Any change order comprising an alteration which involves change in the cost of the works (which sort of alteration is hereinafter called a "Variation") shall be the Subject of an

amendment to the Contract by way of an increase or decrease in the Contract Price and adjustment of the implementation schedule, if any

Procedures for Change Order

- During detailed implementation and subsequently if the IA observes that any new requirement which other than that required for meeting the design criteria is not specific or intended by the Contract has been stipulated by MSeGS, while approving the specifications, calculations, purchase requisitions, other documents etc. he would verbally discuss the matter with MSeGS's Representative.
- In case such requirement arises from the side of the IA, he would also verbally discuss the matter with MSeGS's Representative giving reasons thereof.
- In either of the two cases as explained in the above two Clauses, the representatives of both the parties will discuss on the new requirement for better understanding and to mutually decide whether such requirement constitutes a change order or not.
- If it is mutually agreed that such Requirement constitutes a "Change Order" then a joint memorandum will be prepared and signed by the IA and MSeGS to confirm a "Change Order" and basic ideas of necessary agreed arrangement.
- Upon completion of the study referred to above Clause, the results of this study along with all relevant details including the estimated time and cost effect thereof with supporting documents would be submitted to MSeGS to enable MSeGS to give a final decision whether IA should proceed with the change order or not in the best interest of the works. The estimated cost and time impact indicated by IA shall be considered as a ceiling limit and shall be provisionally considered for taking a decision to implement change order. The time impact applicable to the Contract shall be mutually agreed, subsequently, on the basis of the detailed calculations supported with all relevant back up documents. In case IA fails to submit all necessary substantiation/calculations and back up documents, the decision of the MSeGS regarding time and cost impact shall be final and binding on the IA.
- If MSeGS accepts the implementation of the change order under Clause mentioned above in writing, which would be considered as change order then IA shall commence to proceed with the relevant work stipulated in the change order pending final agreement between the parties with regard to adjustment of the Contract Price and the Construction Schedule.

Conditions for extra work/change order

- The provisions of the Contract shall apply to extra work performed as if the Extra work / Change order has been included in the original Scope of work. However, the Contract Price shall increase / decrease and the Time Schedule shall be adjusted on account of the Extra work / Change orders as may be mutually agreed. The IA's obligations with respect to such work remain in accordance with the Contract.

7.19 Suspension of Work

- The IA shall, if ordered in writing by the MSeGS's Representative, temporarily suspend the works or any part thereof for such a period and such a time as ordered. The IA shall not be entitled to claim compensation for any loss or damage sustained by him by reason of

temporary suspension of the Works as aforesaid. An extension of time for completion corresponding with the delay caused by any such suspension of the works as aforesaid shall be granted to the IA, if request for same is made and that the suspension was not consequent to any default or failure on the part of the IA. In case the suspension of works is not consequent to any default or failure on the part of the IA and lasts for a period of more than 2 months, the IA shall have the option to request MSeGS to terminate the Contract with mutual consent.

- In the event that the MSeGS suspends the progress of work for any reason not attributable to the IA for a period in excess of 30 days in aggregate, rendering the IA to extend his performance guarantee then MSeGS shall bear only the cost of extension of such Bank Guarantee for such extended period restricted to the normal bank rates as applicable in the international banking procedures subject to the IA producing the requisite evidence from the bank concerned.

7.20 Completion of Contract

Unless terminated earlier, the Contract shall terminate on the completion of term as specified in the Contract.

7.21 Payment Schedule

The fee amount will be equal to the amount specified in **Section XII: - Format for Response to the tender: Commercial Bid**

Payments will be released only on satisfactory acceptance of the deliverables for each Task as per the following schedule:

Table 6: Payment Schedule

Component – I

S. No	Payment Schedule	Fee Payable	Remarks
1.	Mobilization advance	10% of Total Cost of Component - I	On submission of bank Guarantee and on signing of Contract/ on mobilization of the implementation team by the successful Bidder.
2.	Requirement Study and Preparation of SRS	10% of Total Cost of Component - I	On successful acceptance of the SRS by the competent authority of MSeGS

S. No	Payment Schedule	Fee Payable	Remarks
3.	Solution Testing, Modification & User Acceptance of the Application	50% of Total Cost of Component - I	On Successful Sign off by the competent authority
4.	Completion of Training and Go-Live of the Application	20% of Total Cost of Component - I	On successful acceptance and signoff
5.	Successful handover of Application to MSeGS	10% of Total Cost of Component - I	On Successful signoff by the competent authority

Component - II

S. No	Payment Schedule	Fee Payable	Remarks
1.	Mobilization advance	10% of Total Cost of Component - II	On submission of bank Guarantee and on signing of Contract/ on mobilization of the implementation team by the successful Bidder.
2.	Delivery of all the Components (Hardware's +Software's)	40% of Total Cost of Component - II	On successful acceptance of the BOM by the competent authority of MSeGS
3.	Installation, commissioning and Integration of all equipments	25% of Total Cost of Component - II	On Successful Sign off by the competent authority
4.	Successful Final Acceptance Test (FAT) and Training of State representatives and officials for the deployed solution	5% of Total Cost of Component - II	On successful acceptance and signoff

S. No	Payment Schedule	Fee Payable	Remarks
5.	Successful handover to the existing DCO with 2 months of onsite support	5% of Total Cost of Component - II	On Successful signoff by the competent authority
6.	Balance 15% will be amortized for the period of the project and shall be paid to the IA in equivalent QGR (Quarterly) with the initiation of O&M period		

7.22 Implementation Schedule

Component - I

S. No:	Scope of Work Area	Time Frame (Elapsed Months)
1.	Issue of Letter of Intent (LoI)	T1
2.	Requirement Study and Preparation of SRS document and Sign-Off	T1+1 Month
3.	Solution Design and Development	T1+ 3 Months
4.	Solution Testing, Modification & User Acceptance	T1+ 4 Months
5.	User Training and Change Management	T1+ 5 Months
6.	System "Go-Live"	T1+ 6 Months

Component - II

S. No:	Scope of Work Area	Time Frame (Elapsed Months)
7.	Issue of Letter of Intent (LoI)	T1
8.	Signing of Agreement with the Implementing Agency release of Work Order.	T1+1 Week
9.	Hardware Procurement and delivery of all the Components a project location	T1+ 8 Months
10.	Installation and configuration of Hardware, Software and Networking Equipment.	T1+ 4 Months

S. No:	Scope of Work Area	Time Frame (Elapsed Months)
11.	Successful Final Acceptance Test (FAT) and Training of State representatives and officials for the deployed solution	T1+ 5 Months
12.	System "Go-Live"	G1 = T1+ 6 Months
13.	Operation and Maintenance	O = G1 + 6 Months

The OEM warranty of software and hardware should be 5 years from the date of Go-Live. It should be noted that suitable penalty, mentioned under 'Penalties' clause of this RFP would be charged to the IA in case of delay from their end and would be finalized in the contract.

The "Go-Live" means that the system is ready in all respect i.e. Supply, Installation, Commissioning, testing & implementation and can now be used by all the end users.

It may be noted that the time schedule for each milestone shown in the table above would be enforced independently, even though some of them are inter-dependent. This would have a cascading effect of penalties for delays in all other milestones dependent on the precedent milestone. Therefore, the IA will have to be extremely careful in establishing an excellent project management setup.

7.23 Events of Default by the Implementing Agency

- The failure on the part of the IA to perform any of its obligations or comply with any of the terms of this Contract shall constitute an Event of Default on the part of the IA. The events of default as mentioned above may include, but not limited to, inter alia, the following also:
    - The IA has failed to perform any instructions or directives issued by the MSeGS which it deems proper and necessary to execute the scope of work under the Contract; or
    - The IA has failed to adhere to any of the key performance indicators as laid down in the Key Performance Measures / Contract or if the IA has fallen short of matching such standards/targets as MSeGS may have designated with respect to any task necessary for the execution of the scope of work under this Contract. The above-mentioned failure on the part of the IA may be in terms of failure to adhere to timelines, specifications, requirements or any other criteria as defined by MSeGS; or
    - The IA has failed to remedy a failure to perform its obligations in accordance with the specifications issued by MSeGS despite being served with a default notice which laid down the specific deviance on the part of the IA to comply with any stipulations or standards as laid down by MSeGS; or
    - IA / IA"s Team has failed to conform with any of the Service / Facility Specifications / Standards as set out in the Scope of Work of this Tender Document or has failed to adhere to any amended direction, modification or clarification as issued by MSeGS during the

term of this Contract and which MSeGS deems proper and necessary for the execution of the Scope of Work under this Contract; or

- The IA has failed to demonstrate or sustain any representation or warranty made by it in this Contract with respect to any of the terms of its Bid or the Tender and this Contract; or
- There is a proceeding for bankruptcy, insolvency, winding up or there is an appointment of receiver, liquidator, assignee, or similar official against or in relation to the IA; or
- IA / IA's Team has failed to comply with or is in breach or contravention of any applicable laws.

Where there has been an occurrence of such defaults inter alia as stated above, MSeGS shall issue a notice of default to the IA, setting out specific defaults / deviances / omissions and providing a notice of Sixty (60) days to enable such defaulting party to remedy the default committed.

7.24 Consequences in Event of Default

- Where an Event of Default subsists or remains uncured beyond permissible or reasonable time, MSeGS may/shall be entitled to the following:
  - For cases where permissible time is not indicated in the contract, MSeGS will decide, at its discretion, the quantum of reasonable time to cure the default.
  - MSeGS may impose any such obligations and conditions and issue any clarifications as may be necessary to inter-alia ensure smooth continuation of Services and the project which the IA shall be obliged to comply with. This may include unilateral re-determination of the consideration payable to the IA hereunder. The IA shall, in addition, take all available steps to minimize loss resulting from such event of default.
- MSeGS may by a written notice of suspension to the IA, suspend all payments to the IA under the Contract provided that such notice of suspension:
  - Shall specify the nature of the failure, and
  - Shall request the IA to remedy such failure within a specified period from the date of receipt of such notice of suspension by the IA.
- MSeGS reserves the right to terminate the contract with 30 days' notice.
- Retain such amounts from the payment due and payable by the MSeGS to the IA as may be required to offset any losses caused to the MSeGS as a result of such event of default and the IA shall compensate the MSeGS for any such loss, damages or other costs, incurred by the State in this regard. Nothing herein shall affect the continued obligation of other members of its Team to perform all their obligations and responsibilities under this Contract in an identical manner as were being performed before the occurrence of the default
- Invoke the Performance Bank Guarantee and other Guarantees furnished hereunder, enforce the Deed of Indemnity, recover such other costs/losses and other amounts from the IA may have resulted from such default and pursue such other rights and/or remedies that may be available to MSeGS under law.

7.25 Termination of the Contract

MSeGS may terminate this Contract in whole or in part by giving the IA prior written notice indicating its intention to terminate the Contract under the following circumstances:

- Where it comes to the MSeGS's attention that the IA (or the IA's Team) is in a position of actual conflict of interest with the interests of MSeGS in relation to any of terms of the Implementing Agency's Bid, the Tender or this Contract.
- Where the IA's ability to survive as an independent corporate entity is threatened or is lost owing to any reason whatsoever including inter alia the filing of any bankruptcy proceedings against the IA, any failure by the IA to pay any of its dues to its creditors, the institution of any winding up proceedings against the IA or the happening of any such events that are adverse to the commercial viability of the IA. In the event of the happening of any events of the above nature, MSeGS shall reserve the right to take any steps as are necessary to ensure the effective transition of the project to a successor Implementing Agency/service provider, and to ensure business continuity.
- **Termination for Default**: MSeGS may, at any time, terminate the Contract by giving 30 days written notice to the IA without compensation to the IA in the Event of Default on the part of the IA which may include failure on the part of the IA to respect any of its commitments with regard to any part of its obligations under its Bid, the Tender or under this Contract.
- **Termination for Insolvency**: MSeGS may at any time terminate the Contract by giving written notice to the IA without compensation to the IA, if the IA becomes bankrupt or otherwise insolvent, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to MSeGS.
- **Termination for Convenience**: MSeGS may by prior written notice sent to the IA at least 3 months in advance 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 MSeGS's convenience, the extent to which performance of work under the Contract is terminated and the date upon which such termination becomes effective.

7.26 Consequences of Termination

- In the event of termination of this contract, due to any cause whatsoever, except where termination is for MSeGS's convenience, the IA shall be blacklisted and the contract will stand cancelled effective from the date of termination of this contract.
- Nothing herein shall restrict the right of MSeGS to invoke the Bank Guarantee and other Guarantees furnished hereunder, enforce the Deed of Indemnity and pursue such other rights and/or remedies that may be available to the MSeGS under law.
- The termination hereof shall not affect any accrued right or liability of either Party nor affect the operation of the provisions of this Contract that are expressly or by implication intended to come into or continue in force on or after such termination.

7.27 Penalty

Commencement of activities for commissioning of Cloud Enablement components and ongoing performance and service levels shall be as per timelines and parameters stipulated by MSeGS in

the contract, failing which MSeGS may in its discretion-imposed penalties on the IA as defined in the Service Level Agreements of the RFP document.

7.28 Force Majeure

- Force Majeure shall not include any events caused due to acts/omissions of such Party or result from a breach/contravention of any of the terms of the Contract, Bid and/or the Tender. It shall also not include any default on the part of a Party due to its negligence or failure to implement the stipulated/proposed precautions, as were required to be taken under the Contract.
- The failure or occurrence of a delay in performance of any of the obligations of either party shall constitute a Force Majeure event only where such failure or delay could not have reasonably been foreseen or where despite the presence of adequate and stipulated safeguards the failure to perform obligations has occurred. In such an event, the affected party shall inform the other party in writing within five days of the occurrence of such event. MSeGS will make the payments due for Services rendered till the occurrence of Force Majeure. However, any failure or lapse on the part of the IA in performing any obligation as is necessary and proper to negate the damage due to projected force majeure events or to mitigate the damage that may be caused due to the abovementioned events or the failure to provide adequate disaster management/recovery or any failure in setting up a contingency mechanism would not constitute force majeure, as set out above.
- In case of a Force Majeure, all Parties will endeavour to agree on an alternate mode of performance in order to ensure the continuity of service and implementation of the obligations of a party under the Contract and to minimize any adverse consequences of Force Majeure.

7.29 Liquidated Damages

- Subject to Force Majeure if the Bidder fails to complete the Supply, Installation, Configuration, Testing and Training and Final Acceptance of the Cloud Enablement components and its integration with the existing infrastructure of the Mizoram State Data Centre before the scheduled completion date or the extended date or if IA repudiates the Contract before completion of the Work, MSeGS, at its discretion, may without prejudice to any other right or remedy available to the State the Contract recover a maximum of 20% (twenty percent) of the project cost from the IA as Liquidated Damages (LD). This 20% (twenty percent) will be staggered over a period of the project
- MSeGS may without prejudice to its right to affect recovery by any other method deduct the amount of liquidated damages from any money belonging to the IA in its hands (which includes the MSeGS's right to claim such amount against IA's Bank Guarantee) or which may become due to the IA. Any such recovery or liquidated damages shall not in any way relieve the IA from any of its obligations to complete the Works or from any other obligations and liabilities under the Contract.

7.30 Dispute Resolution and Arbitration

MSeGS and the Implementing Agency 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.

If, after thirty (30) days from the commencement of such informal negotiations, MSeGS and the Implementing Agency have been unable to amicably resolve dispute, either party may require that the dispute be referred for resolution to the formal mechanisms, which may include, but are not restricted to, conciliation and mediation by a third party acceptable to both, or in accordance with the Arbitration and Conciliation Act, 1996.

All Arbitration proceedings shall be held at Aizawl, Mizoram, and the language of the arbitration proceedings and that of all documents and communications between the parties shall be in English.

7.31 Conflict of Interest

The IA shall disclose to MSeGS in writing, all actual and potential conflicts of interest that exist, arise or may arise (either for the IA or the IA's Team) in the course of performing the Services as soon as practically possible after it becomes aware of that conflict.

7.32 Severance

In the event any provision of this Contract is held to be invalid or unenforceable under the applicable law, the remaining provisions of this Contract shall remain in full force and effect.

7.33 Governing Language

The Agreement shall be written in English language. Language of the Agreement shall govern its interpretation. All correspondence and other documents pertaining to the Contract that are exchanged by parties shall be written in English language only.

7.34 "No Claim" Certificate

The IA shall not be entitled to make any claim, whatsoever against MSeGS under or by virtue of or arising out of this contract, nor shall the MSeGS entertain or consider any such claim, if made by the IA after he shall have signed a "No claim" certificate in favour of MSeGS in such forms as shall be required by MSeGS after the works are finally accepted.

7.35 Publicity

The IA shall not make or permit to be made a public announcement or media release about any aspect of this Contract unless MSeGS first gives the IA its written consent.

7.36 General

Relationship between the Parties

- Nothing in this Contract constitutes any fiduciary relationship between MSeGS and IA / IA's Team or any relationship of employer employee, principal and agent,or partnership, between the MSeGS and IA
- No Party has any authority to bind the other Party in any manner whatsoever except as agreed under the terms of this Contract
- MSeGS has no obligations to the IA's Team except as agreed under the terms of this Contract

No Assignment

The IA shall not transfer any interest, right, benefit or obligation under this Contract without the prior written consent of MSeGS

Survival

The provisions of the clauses of this Contract in relation to documents, data, processes, property, Intellectual Property Rights, indemnity, publicity and confidentiality and ownership survive the expiry or termination of this Contract and in relation to confidentiality, the obligations continue to apply unless MSeGS notifies the IA of its release from those obligations

Entire Contract

The terms and conditions, Scope of Work, SLA etc. laid down in the Tender and all annexure thereto as also the Bid and any attachments/annexes thereto shall be read in consonance with and form an integral part of this Contract. This Contract supersedes any prior Contract, understanding or representation of the Parties on the subject matter

Governing Law

This Contract shall be governed in accordance with the laws of India

Jurisdiction of Courts

Guwahati High Court, Aizawl Bench will have exclusive jurisdiction to determine any proceeding in relation to this Contract

Compliance with Laws

The IA shall comply with the laws in force in India in the course of performing this Contract.

Notices

A "notice" means:

a. a notice; or
b. consent, approval or other communication required to be in writing under this Contract

All notices, requests or consents provided for or permitted to be given under this Contract shall be in writing and shall be deemed effectively given when personally delivered or mailed by pre-paid certified/registered mail, return receipt requested, addressed as follows and shall be deemed received 7 days after mailing or on the date of delivery if personally delivered whichever is earlier:

To MSeGS

at:< Mizoram and address >

To IA at:

Attn:

[Phone:]

[email:]

Any Party may change the address to which notices are to be directed to it by notice to the other parties in the manner specified above.

A notice served on a Representative is taken to be notice to that Representative's Party

Waiver

- Any waiver of any provision of this Contract is ineffective unless it is in writing and signed by the Party waiving its rights
- A waiver by either Party in respect of a breach of a provision of this Contract by the other Party is not a waiver in respect of any other breach of that or any other provision
- The failure of either Party to enforce at any time any of the provisions of this Contract shall not be interpreted as a waiver of such provision

7.37 Delivery and Documentation

It is the responsibility of the Implementing Agency to supply all the Hardware and Networking equipment, as mentioned in the schedule of requirements in the respective project site. These project sites along with the required quantities of items to be supplied will be communicated to Implementing Agency at a later stage. The Implementing Agency shall intimate MSeGS by letter/fax/Telephone, at least 7 days before the actual arrival of the systems at the Site, the full details of the delivery including contract number, couriers receipt number and date, description of systems, quantity etc. The Implementing Agency shall mail the following documents to MSeGS -

- 3 copies of the invoice showing systems description, quantity, unit price, total amount
- Courier's receipt/acknowledgement of receipt of systems
- Insurance certificate
- Manufacturer's/Supplier's warranty certificate
- Factory Inspection Certificates.

7.38 Hardware Installation

The Implementing Agency is responsible for all unpacking, assemblies, wiring, installations, cabling between hardware units and connecting to power supplies. The IA will test all hardware operations and accomplish all adjustments necessary for successful and continuous operation of the hardware at all installation sites.

7.39 Acquaintance with Local Conditions

The IA is expected to fully get acquainted with the local conditions and factors, which would have any effect on the performance of the contract and /or the cost.

7.40 Failure to Agree with the Terms and Conditions of the RFP

Failure of the IA to agree with the Terms and Conditions of the RFP shall constitute sufficient grounds for the annulment of the award, in which event MSeGS may award the Contract to the next best value Bidder or call for new Bids.

7.41 Modification

Any modification of this Contract shall be in writing and signed by an authorized representative of each Party

7.42 Application

These General Conditions shall apply to the extent that provisions in other parts of the Contract do not supersede them

7.43 IT Act 2000

Besides the terms and conditions stated in this document, the contract shall also be governed by the overall acts and guidelines as mentioned in IT Act 2000, and any other guideline issued by State from time to time.

Section – VIII

Service Level Agreement

Section VIII. Service Level Agreement

The purpose of this Service Level Agreement (hereinafter referred to as SLA) is to clearly define the levels of service which shall be expected from the Cloud Solution provider (hereinafter referred to as IA) towards the MSeGS during the implementation and its subsequent support for the project period.

8.1 Definitions

For the purpose of this SLA, the definitions and terms as specified in the contract along with the following terms shall have the meanings set forth below:

1. "**Incident**" refers to any event / abnormalities in the functioning of the Cloud Enablement components in State Data Centre / specified services that may lead to disruption in normal operations of the Cloud based services

2. **"Support"** shall mean the 24x7 support which shall handle patch updates, upgrades Fault Reporting, Trouble Ticketing, and resolution of related enquiries during this contract. Interactive remote diagnostic support shall also be there, allowing technical support engineers to troubleshoot an incident securely through a browser-based remote control feature.

3. **Availability** shall mean the time for which the services offered are available for conducting operations from the equipment / solution hosted on Cloud. Availability percentage is measured as **Availability %age** = {(Agreed Service Time – Down Time)/ (Agreed Service time)*(100%)

4. **Scheduled Maintenance Time / Scheduled downtime** shall mean the time that the System is not in service due to a scheduled work. Scheduled maintenance time is planned downtime with the prior permission of the designated SDC operator.

5. **Scheduled operation time** means the scheduled operating hours of the System for the month. All scheduled maintenance time on the system would be deducted from the total operation time for the month to give the scheduled operation time. The total operation time for the systems and applications hosted on cloud will be 24x7x365. **Downtime** means accumulated time during which the System is totally inoperable within the Scheduled Operation Time but outside the scheduled maintenance time.

6. **Subsystem Downtime** shall mean the downtime observed in major components of the cloud infrastructure. E.g. in Cloud Network or Virtualization Layer or Storage, Virtual Operating Systems etc. will be the major components in cloud solution. The amount (%) that the sub-system contributes to the mission of the Total System. **Total System Downtime** shall be defined as the sum of the downtimes of each functional sub-system in as much as that sub-system contributes to the mission of the Total System. The average downtime of the all subsystems will be calculated by following formula:

   Subsystem Downtime = (Downtime Subsystem A + Downtime Subsystem B + Downtime Subsystem N) / Total Subsystems.

7. **"Response time"** is defined as the time between receipt of the incident by support team and its logging / generation of ticket on the system

8. **"Resolution Time" s**hall mean the time taken (after the incident has been reported to the support team) till resolution. The severity parameters have been defined below:

The severity would be as follows:

a. **Critical:** In case more than 1 physical servers are down threatening business continuity (VMs on the physical server are not accessible and not working and Multiple Clients are affected) which is attributable to the Cloud Solution implemented by the SI, it shall be considered as a Critical incident.

b. **High:** In case 1 physical server is down causing high impact on business operations (VMs on physical server are not accessible/not working (few clients are affected) which is attributable to the cloud solution implemented by SI.

c. **Medium**: In case an essential functionality of the Cloud solution (like VM availability) becomes unavailable in the Live SDC environment which is not actually hampering the live services of the Cloud but may impact the services if not attended immediately will be termed as medium.

d. **Low**: The incidents would be termed as low, which does not have any significant impact on the Cloud service delivery (little or no impact on business entity), eg:

   i. A minor problem or question that does not affect the software function,

   ii. An error in software product Documentation that has no significant effect on operations; or

   iii. A suggestion for new features or software product enhancement.

8.2 Planned Downtime

Planned downtime shall mean any time when the Cloud based services from the State Data Centre are unavailable because of Urgent Maintenance activities and any other scheduled maintenance or upgrade activities that may or may not be periodic. The planned downtime must be notified to the MSeGS at least **48 hours** in advance.

Urgent Maintenance activities are maintenance activities required by application or systems that cannot be postponed until the next available or convenient maintenance window, and may include but not limited to restarting applications, rebooting servers, applying patches or fixes, reconfiguring, reloading data etc.

8.3 Service Levels

This SLA document provides for minimum level of services required as per contractual obligations based on performance indicators and measurements thereof. The SI shall ensure provisioning of all required services, while monitoring the performance of the same, to effectively comply with the performance levels mentioned below. The services provided by the IA shall be reviewed by MSeGS, which will:

- Regularly check performance of the SI against this SLA
- Discuss escalated problems, new issues and matters still outstanding for resolution
- Review statistics related to rectification of outstanding faults and agreed changes
- Obtain suggestions for changes to improve the service levels

The SLAs have been logically segregated in the following categories:

1. Implementation Service-Related Levels
2. Support Service Levels
3. Compliance and Reporting Service Levels

The targets shown in the following tables are mapped with the requirements specified for Cloud Enablement components for State Data Centre, as a part of support for the Cloud infrastructure; it is the responsibility of the IA to maintain the same SLAs with the OEM for their support and maintenance which can be extended to the State.

1. Implementation service levels

Table 7: Implementation Service Levels

SL. No	Service Category	Target	Penalty
1.	**Team Mobilization, Preparation of Project Plan, Kick-off meeting etc.**	One week from the date of release of Letter of Intent (LoI)	After 1 week of release of LoI if the Team is not deployed by the IA > Letter of Warning If Service Category is still not adhered to, for every subsequent week until the signing of Contract > Penalty of Rs. 50,000
2.	**Supply, Installation and Commissioning**	30 weeks from the date of signing of contract	Penalties will be applicable after 30 weeks, if the work is still not completed. (Work completion shall be considered on the date of submission of all documents, and submission of all applicable reports as mentioned in the Contract) A penalty of 0.25% per week subject to a maximum of 5%. Penalty percentage as mentioned will be computed on the final value of contract between MSeGS and IA.

SL. No	Service Category	Target	Penalty
3.	**Training**	2 weeks from the completion of Supply, Installation and Commissioning	Penalties will be applicable after 2 weeks from the completion of Supply, Installation and Commissioning. (Work completion shall be considered on the date of submission of all Training documents, completion of Training schedules, and submission of all applicable reports as mentioned in the Contract) A penalty of 0.25% per week subject to a maximum of 5%. Penalty percentage as mentioned will be computed on the final value of contract between MSeGS and IA.
4.	**Final Acceptance Test (FAT)**	2 weeks from the commencement completion of commissioning	Penalties applicable after 2 weeks from the Completion of commissioning. (Work completion shall be considered on the date of submission of all documents, and submission of all applicable reports as mentioned in the Contract) A penalty of 0.25% per week subject to a maximum of 5%. Penalty percentage as mentioned will be computed on the final value of contract between State and SI.

Implementing Agency's Services include, but not limit to, the following:

- Feasibility Check
- Team Mobilization for the commencement of the work
- Before the initialization of the work a complete schedule will be provided by the Bidder to MSeGS as the Project Plan
- Weekly track report would be given to MSeGS by end of every week for acknowledgement and review
- Delivery of all the Equipments and Software on time which are part of Scope of Work
- Installation & Commissioning of all the components
- Installation report needs to be checked and passed by MSeGS
- All the documents, manuals & CDs need to be made available to MSeGS
- Licenses, Service Support documents will be checked and cleared by MSeGS
- Component-wise installation, commissioning & testing schedule shall be made available to MSeGS, by which periodic tracking of all the components can be done
- Quality control document for installation and commissioning shall be prepared by IA and verified by MSeGS before installation kick off
- Complete Load testing of all the equipment's as per the equipment Data Sheet would be done by SI in presence of appointed concerned authority of MSeGS
- Final Acceptance Test (FAT) of the Cloud Enablement components as a whole which will also include running at least 1 application in the virtual environment at the SDC
- Training schedule to be submitted two weeks prior to the start of Training and approved by MSeGS after signing the contract
- IA services will also include any scripting, adapters required for integration of the solution
- Handover of the solution to MSeGS, operating and maintaining it for a period of 2 months from the date of O&M start date as declared by the State

2. Support Services Levels

Time in which a complaint / query is resolved after it has been responded to by the IT service management.

Table 8: Support Service Services related SLA

Type of Incident	Response Time	Resolution Time	Penalty
Critical	**10 Minutes**	T = 1 hr	No Penalty
		T1 = T+2 hours, if the resolution time is between T and T1	0.5% of the QGR for every unresolved call
		T2 = T1+2, if the resolution time is between T1 and T2	1% of the QGR for every unresolved call
		> T2	2% of the QGR for every unresolved call
Medium	**30 Minutes**	≤ 2 hours from time of incident logged.	No Penalty
		> 2 Hours and ≤ 4 Hours	0.5% of the QGR for every unresolved call,
		> 4 Hours	1% of the QGR for every unresolved call

Support Services include the following:

- Patch updates
- Call log maintenance
- SMS, Telephonic & Mail support should be provided to the State
- Escalation Matrix needs to be maintained by the helpdesk team
- Any call logs and its associated resolution should be stored in knowledge management database for future reference
- IA will be responsible for end-to-end handling of calls. It includes coordinating with different vendors, tracking each incident / call till resolution through tickets generation and information to callers through emails and phone, providing feedback to callers through email and phone
- Analyze the incident / call statistics and provide monthly reports including but not limited to:
    a. Type of incidents / calls logged
    b. Incidents / calls resolved
    c. Incidents / calls open

3. Compliance and Reporting

Table 9: MIS Reporting

S. No.	Measurement	Definition	Target	Penalty
1	Submission of MIS Reports	The IA shall submit the MIS reports as requested by MSeGS, broadly classified below but not limited to: IMAC (Install, Move, Add, Change) Report Exception report indicating calls completed beyond SLA, with calculation of non-performance deduction. Report on planned downtime Performance Report The IA shall workout the formats for above reports and get these approved by MSeGS within a month of being awarded the contract	Report for the previous quarter shall be submitted to the MSeGS by the 5th day of beginning of current quarter	≤ 5 Days-No Penalty
				Between 6 – 10 days - 0.5% of QGR
				Between 11 – 20 days - 1% of QGR
				Between 21 – 30 days - 2% of QGR

Accuracy of grievance logging by IA

The objective is to measure the accuracy with which IA register State complaints. The complaints that have been captured incorrectly by the Help desk of the DCCO make it difficult to resolve the same. MSeGS would like to ensure that no more than 5% of complaints are incorrectly captured. The complaints that are marked with a wrong tag shall be used to calculate the percentage of incorrect complaints lodged by the DCCO (which would be termed as call not closed).

SLA Compliance Review Process

- The IA has to submit all the reports pertaining to SLA Review process within 2 weeks after the end of the quarter.
- All the reports must be made available to MSeGS, as and when the report is generated or as and when asked by the competent authority.
- In case the issue is still unresolved, the arbitration procedures described in the Terms & Conditions section will be applicable.

8.4 Penalties

- The total deduction per quarter shall not exceed 20% of the total QGR value
- Two consecutive quarterly deductions amounting to more than 20% of the total QGR on account of any reasons will be deemed to be an event of default and termination
- It is the right of MSeGS to bring any external resource at any time for SLA review
- No Carry forward of any penalties of SLA calculations can be done from any of the preceding quarters.

Section – IX

Functional Requirement Specification

Section IX. Functional Requirement Specification

9.1 Mizoram e-Services Portal

9.1.1 General Requirement

Sr	Technical Solution Architecture Requirements
1.	The Application needs to be architected using robust and proven software and hardware technologies like Service-Oriented Architecture (SOA) and open industry standards
2.	The solution architecture should be built on sound architectural principles enabling fault-tolerance, high-performance, and scalability both on the software and hardware levels
3.	The system should be designed to have good performance even from offices connected on low bandwidth
4.	Portal and Web applications should be responsive and supported on the mobile browsers of Android, iOS and Windows mobile platforms
5.	The system should be developed to be deployed in a 3-tier data centre architecture
6.	The system should support SSL encrypted connections
7.	The system should be designed for access through browser based systems and must impose minimal requirements on the client device
8.	The system should support secure VPN connections
9.	The system should use HTTPS as the communication protocol
10.	The system should run perfectly on all common browsers
11.	The system should be compliant with W3C, WCAG and other GoI guidelines
12.	The system must be available to users: 24/7 (on all days of the week)
13.	The planned downtime of the system should not exceed 6 hours per rolling 3 months period. The same should be carried out during off peak hours at night.
14.	There should be no single point of failure and adequate level of redundancy should be built in to meet the system uptime requirement. Data backup till the last transaction occurring in the system should be ensured. The following RTO and RPO objectives should be met: • Peak Hours: Zero RPO and Zero RTO • Non-Peak Hours: Zero RPO and RTO <= 60 minutes
a) Software Architecture Requirements	

1.	Software architecture must support web services standards including XML, SOAP, UDDI and WSDL
2.	Customized or bespoke applications, if any, should be design with minimum 3-tier architecture with UI layer, Business layer and Data Access layer segregated
3.	UI framework should follow standard model-view-controller (MVC) design
4.	Software architecture must support appropriate load balancing for scalability and performance
5.	Software architecture must support flexibility in adding functionalities or applications.
6.	Software architecture components should utilize the high availability, clustering, and load balancing features available in the proposed hardware architecture to increase system performance and scalability features.
7.	Software architecture must support trace logging, error notification, issue resolution and exception handling.
8.	The system should provide for role based control for the functionality within the system
9.	All error messages produced by the System must be meaningful, so that they can be appropriately acted upon by the users who are likely to see them.
10.	The search results should be fetched from the database in batches. The batch size should be configurable in the system.
11.	Records should be displayed on screen in batches/paged manner. The number of records in a page should be configurable in the system.
12.	If a user is inactive for a specified period of time, the user session should expire. The inactivity period should be configurable in the system with a default value of 10 minutes.
b)	**Development, Testing, Staging, and Production Requirements**
1.	Appropriate development, test, and staging hardware environments should be provided and explained how they are related to production environment. This must be supported by explanations on how the development, test, and staging environment support the implementation activities of the Application.
2.	Development and test environment should include configuration management capabilities and tools for system configuration, versioning scheme, documentation, change control processes and procedures to manage deployment of solution deployment.
3.	The test, development, and staging environment should include required workstations, desktops, and tools appropriate to support development, testing, and staging, and deployment tasks.
4.	The development, test, and staging hardware environments must include similar operating systems, software components, products, and tools to those of production environment.

5.	The development, test, and staging environments should be independent logically and physically from the production environment and of each other.
6.	The development environment should be used for development and should be configured to allow access for developers' workstations.
7.	The staging environment should be used for functional and user acceptance testing, stress testing, and performance benchmarking.
8.	The test environment should be used as a testing environment of the Application and its software components and products. The test environment should be a scaled-down configuration of the production environment.
c) Security Requirements	
1.	A secure system should be provided at the hardware infrastructure level, software level, and access level.
2.	Authentication, Authorization & Access Control 2 factors (User ID & Password and Digital Signature) security mechanisms should be implemented to enable secure login and authorized access to portal information and services.
3.	Confidentiality of sensitive information and data of users and portal information should be ensured.
4.	Appropriate mechanisms, protocols, and algorithms necessary to protect sensitive and confirmation data and information both during communication and storage should be implemented.
5.	The system should ensure high standards of security and access control through the following at a minimum: • Prevent cross site scripting • Validate and encode the incoming data /user request • Prevent SQL injection • Prevent cross frame scripting, URL modification and any type of man in the middle attack • Sanitize the user inputs • Do not allow hard delete and perform only soft tagging the row for deletion • Sensitive information like username, password etc. should not be visible in the url
6.	The system should maintain audit trail for all critical actions taken in the system and the system should allow to implement the data retention and classification policies of the board as applicable to restrict the storage of data and access/publication of data
7.	The proposed system should include design and implementation of a comprehensive IS security policy in line with ISO 27001 standards.

8.	The proposed system should provide security including identification, authentication, authorization, access control, administration and audit and support for industry standard protocols
9.	The proposed system should have a security architecture which adheres to the security standards and guidelines such as • ISO 27001 • Information security standards framework and guidelines standards under e-Governance standards (http://egovstandards.gov.in) • Information security guidelines as published by Data Security Council of India (DSCI) • System shall comply with IT (Amendment) Act 2008
10.	The proposed system should support the below Integration security standards: • Authentication • Authorization • Encryption • Secure Conversation • Non-repudiation • XML Firewalls • Security standards support • WS-Security • WS-Trust • WS-Secure Conversations • WS-Basic Security Profile
11.	The proposed system should be monitored by periodic information security audits / assessments performed by or on behalf of the Implementing Authority. The scope of these audits / assessments may include, but are not limited to, a review of: access and authorization procedures, physical security controls, backup and recovery procedures, and program change controls. To the extent that the IA deems it necessary to carry out a program of inspection and audit / assessment to safeguard against threats and hazards to the confidentiality, integrity, and availability of data, the Selected Bidder (IA) shall provide the IA's representatives access to its facilities, installations, technical resources, operations, documentation, records, databases and personnel. The Selected Bidder must provide IA access to various monitoring and performance measurement systems (both manual and automated). IA has the right to get the monitoring and performance measurement systems (both manual and automated) audited / assessed without prior approval / notice to the Selected Bidder

12.	The proposed system should ensure that data, especially those to pertaining to registration process, transaction process as well as the data that is stored at various points is appropriately secured as per minimum standard 128 Bit AES/3DES encryption.
13.	The proposed system should provide database security mechanism at core level of the database
14.	The proposed system should support native optional database level encryption on the table columns, table spaces or backups.
15.	The database of the proposed system should provide option for secured data storage for historic data changes for compliance and tracking the changes.
16.	The proposed system should be able to ensure the integrity of the system from accidental or malicious damage to data
17.	The proposed system should be able to check the authenticity of the data entering the system
18.	The proposed system should be able to generate a report on all "Authorization Failure" messages per user ID
19.	Retention periods, archival policies and read-only restrictions must be strictly enforceable on all logs maintained in the system
20.	The proposed system should be able to monitor security and intrusions into the system and take necessary preventive and corrective actions.
21.	The proposed system should provide ability to monitor, proactively identify and shutdown the following types of incidents through different modes of communication (email, SMS, phone call, dashboard etc.): i. Pharming ii. Trojan horse iii. Similar Domains (old/new)
22.	The proposed system should have the option to be configured to generate audit trails in and detailed auditing reports
23.	The proposed system must provide ACL objects and a security model that can be configured for enforcement of user rights
24.	The proposed system should be designed to provide for a well-designed security of physical and digital assets, data and network security, backup and recovery and disaster recovery system.
25.	The proposed system should have tamper proof data storage to prevent unauthorised data tampering
26.	The system should record the IP address of the client machine/device in the audit trail

27.	The proposed system should store User ID's and passwords in an encrypted format. Passwords must be encrypted using MD5 hash algorithm or equivalent
28.	The proposed system should be capable of encrypting the password / other sensitive data during data transmission
29.	The proposed system should have a Business Continuity Plan and a Disaster Recovery Plan prepared and implemented by the selected Bidder before commencement of the operations. Robust backup procedures to be established for the same.
d) Monitoring and Management Requirements	
1.	The Application should provide monitoring and management of the entire Solution including all software components and application.
2.	The monitoring and management should monitor health of software and hardware infrastructure running the Application covering operating system, database, software components, applications, servers, and other related software and hardware components. It should provide proactive monitoring, alerting and reporting.
e) Performance and Scalability Requirements	
1.	The design of the Application should be scalable to handle increasing number of users.
2.	The Application should provide measurable and acceptable performance requirements for users, for different connectivity bandwidths.
3.	The Application should provide optimal and high performance Portal Solution satisfying response time for slow Internet connections and different browsers.
4.	The system should perform well for a minimum of 250 concurrent users
5.	The system should perform well on minimum bandwidth of 128 KBPS
f) Implementation Requirements	
1.	The IA will be required to deploy manpower and other project resources as per the terms & conditions of the Contract
2.	The IA will be required to work closely with the IA and perform detailed functional requirements and analysis of the Application to confirm and document functional / system requirement specifications for the portal and its applications to fulfil its objectives.
3.	The IA will be expected to carry the complete implementation and deployment of the Application within the timelines specified in the RFP.
4.	The IA is expected to develop, test, stage, and deploy all functional modules of the Application and any hardware components of technical & functional requirements
g) Project Management	

1. Selected IA is required to provide an implementation plan illustrating all functional analysis, development, testing, staging, and deployment activities.

2. Selected IA is required to specify and describe the different phases and activities of the project. It is very important for the IA that the Selected IA provide a quality implementation plan covering all aspects of the project. The plan shall clearly specify the start and end dates (relative to contract signing) of each of the project phases specifying key milestones allowing visibility of project progress.

3. Selected IA is required to use standard project management tools such as precedence diagrams, critical path charts, etc. to create and manage implementation plan and schedule. The table below shows the minimum stages and deliverables:

Stage	Activities	Deliverables
Functional & Requirements Analysis	• Define Functional Requirements • Requirements management • Prototyping • Documentation • Data Migration Preparation	• Software Requirements and Specifications Document • Detailed Scope of Work • Work Breakdown Structure • Detailed Project Schedule • Data Migration Plan
Design	• Detailed Software Solution Architecture design • Detailed Hardware Solution Architecture Design • Data Schema Design • User Interface Design • Integration & Interfaces Design • Prototyping Design Validation • Documentation	• Design Specifications Documents of Software solutions • Design Specifications Documents of Hardware solutions • User Interface Design Specifications • Integration Design Specifications • Data design and migration
Development	• Software installation, configuration, and customization • Hardware installation and configuration • Development • Unit Testing • Documentation	• Development Plan • Updated Design Document • Installed software and hardware • Functional modules & Portal Solution • Problem reporting

	Testing	• System Testing • Integration Testing • Regression Testing • Performance/Stress/Volume Testing • Security Testing including Penetration Testing • User Acceptance Testing • User Acceptance Test Results • DC-DR Failover Testing • Completed Test Cases • Data Migration tests • Documentation	• Complete Test Cases • Test Plan • User Acceptance Criteria • Test Results and Reports • Problem reporting • Problem resolution testing • Data Migration Testing
	Deployment	• Training courses and sessions • Operations Planning • User Manual • Operations Manuals	• Knowledge Transfer and training plan • User Manual, Training Manual • Operations Plan • Operations Policies and Procedures
	In addition to the above deliverables, the IA is required to maintain and update the Requirements Traceability Matrix throughout the project duration.		
4.	Selected IA is required to describe in detail project management processes, methodologies and procedures.		
5.	Describe what IA resources will be necessary for the project to succeed.		
6.	Describe how IA management will receive up-to-date reports on project status.		
7.	Describe the change management procedures to handle such things as “out-of-scope” requests or changing business needs of IA while the project is underway.		
8.	Describe what procedures will be used to keep the project on track, and what escalation procedures will be employed to address any problems with project progress.		
9.	Describe what quality assurance processes, procedures, formal reviews, etc. will be in place.		
10.	Describe the proposed conflict resolution / escalation process between the IA and IA to handle project or contractual disputes.		

11.	Selected IA is required to describe the proposed project structure identifying all project individuals including project manager, business analysts, software developers, QA engineers, hardware / network engineers, administrators, Change Management experts, and others.
12.	Selected IA shall provide a comprehensive warranty that covers all components after the issuance of the final acceptance of the Application. The warranty should cover all materials, licenses, services, and support for both hardware and software. Selected IA shall administer warranties with serial number and warranty period. Upon final acceptance of the IA, all OEM warranties will be transferred to the IA at no additional charge. All warranty documentation (whether expired or not) will be delivered to IA at the issuance of the final acceptance certificate.
13.	Selected IA is required to provide Premium Level warranty and support through the vendor for all hardware and software used for Application. Selected IA' warranty must cover all equipment and work activities contained in the contract against all design, manufacturing, and environment faults until the issuance of the final acceptance.
h)	**Quality Assurance & Acceptance Requirements**
1.	Selected IA is required to develop and implement quality assurance processes and procedures to ensure that the Application and operations are performed to meet the quality standards that are relevant to each area in all project phases.
2.	Selected IA is required to use various tools and techniques that can make tests run easily and the results are automatically measured. In this way, testing tools provide a more cost-effective and efficient solution than their manual counterparts. Plus, they minimize the risk of human error during testing.
3.	In order to ensure that such a QA mechanism is effective and acceptance of Application, the following tests are required for acceptance: Unit Testing: Basic validation of developed components by developers. Functional / Internal Integration Testing: Validation of developed components against functional requirements and design specifications. System Testing: Validation of both functional and technical requirements for the integrated Solution. This could include external integration if required or it can be separated into testing phases. UAT: User Acceptance Testing (UAT) validation of the Portal Solution and assurance that it meets both functional and technical requirements Stress and Performance Testing: Load testing enabling understanding of performance and behaviour of Portal Solution under large number of users and high-load conditions. Security Testing: Security testing to ensure that the system is secured from external and internal threats DC-DR Failover Testing: Failover testing to ensure that the system is up and running within the stipulated timeframe (Recovery Time Objective) and from the desired point (Recovery Point Objective)
4.	Selected IA is required to describe their QA and testing approaches and procedures as well as testing tools for conducting various tests in support of the acceptance of the Portal Solution.

5.	Furthermore, Selected IA to describe their documentation standards e.g. Documentation description, documentation identification, content, nomenclature etc. as well.
6.	The SI/IA will support the STQC certification phase in every possible way and ensure that the Application project obtains all necessary certifications

9.1.2 Portal

Sr	Functional Requirement
1.	The system should allow users to access the portal via the internet and intranet
2.	Portal should be responsive and supported on the mobile browsers of Android, iOS and Windows mobile platforms.
3.	Acknowledge Identification Number (AIN) should be generated to enhance security
4.	The system should have the functionality to provide role based access to various modules/information/repository
5.	The user should be displayed approved/pending/in process service requests after login.
6.	The system should allow users to search for their request on the basis of Acknowledgment Identification Number (AIN) or Applicant details.
7.	The system should display service request details and status on the screen based on the user search
8.	The system should allow users to save the status as a PDF file and/or print the status
9.	System should allow the user to download all applicable forms as e-forms and submit/upload the same e-form once the user has connectivity. Accordingly, the related database should be updated with application details
10.	System should provide the user with an Online Help facility like Frequently Asked Questions on workflow of applications. System may also provide online self-training
11.	System should allow the user to view the time taken to process the service request (to monitor service delivery time) (Technically: system should keep a log of the start time of the registration of the general service request till such time that the status of the application is closed/approved; system should display the user at the end of the service fulfilment, the total time taken to complete the service delivery)
12.	System should provide an acknowledgement with AIN to the applicant (once the application has been submitted online) through 1. Online Application 2. Mobile Web Browser

13.	The system should allow user to view menu of services available
14.	Users (Citizen, Business) shall access the portal through public network
15.	User (Citizen, Business) should have facility to view his/her details and service requests only
16.	Auto Escalation matrix along with service levels should be configurable in the system
17.	The system should have the payment component integrated for subscription
18.	Services should be categorized by department
19.	Provision in the Application System to send SMS alerts to the Citizens of the each stage of approval process from submission , verification to approval
20.	System should have a dynamic workflow engine so that workflows can be changed with minimum effort
21.	The system should have the functionality of integrating with social network sites as per the standard practise

9.1.3 Records and Query Management Service

Sr	Functional Requirement
1	The system should provide the user to search the repository based on AIN, Service, date range and year/month/week. It should also provide the user to select multiple values for a single field.
2	The system should allow the administrator to configure / build a query on the searchable data through query bui*f*lders.
3	System should provide the ability to store, load and delete custom queries to each user for easy retrieval.
4	System should maintain the history of data in case of modifications.
5	System should provide the user with an ability to search using both full and partial strings. This search interface should be made available both as a separate interface and as well as an integrated interface.
6	System should provide the user to export the search results in the standard formats selected by the user like doc, pdf, xls, etc. in printer friendly format with page numbers printed on every page.
7	If a user performs a quick or advanced search, the System must never include in the search result list any record which the user does not have the right to access.

8	System should allow the user to conduct an advanced search based on sub parameters on a major data field

9.1.4 Periodic Reports

Sr	Functional Requirement
1.	System should present customized dashboards and reports to the users based on their role
2.	System should present various statistics such as summarized information, current progress, monthly numbers, comparative statements, trends with charting capability.
3.	System should allow the user to view alerts/events/reminders
4.	System should present the user with statistics of all applications
5.	System should present the application usage statistics that provide indicators on the application uptake and usage by the Departments/Offices
6.	System should provide role based access to users hence showing required information to the authorized users only
7.	System should enable the users to filter there required information by passing/selecting certain information/criteria
8.	System should allow users to filter results by date and time
9.	System should allow users to filter the results by service name, category, application received, processed, pending along with no of days, rejected, SLA achieved, SLA missed etc.
10.	System should assign various colour codes like Green, Blue, Red etc. for service request closed within SLA, in process and under SLA, Missed SLA etc. respectively
11.	System should display the results in various graphical manner and it should also have the functionality to display further details like the particular service request detail, person with whom the request is pending, SLA details etc. by clicking on particular graph
12.	The system should have drilldown feature to individual office/department/ application level, if the management wants to review/ view any particular details, in case of any requirement
13.	System should have the facility to export the results (Graphs and further details) to .doc, .csv, .pdf format outputs
14.	System should incorporate business intelligence to compare various results from the dashboard where applicable

9.1.5 Login

Sr	Functional Requirement
1.	System should present option for user to create Login through portal
2.	The department user login can be created only by Administrator. Roles and access to permissible services should be set by the administrator upon approval from the department head or concerned authority
3.	Citizen can create login after providing necessary information and will have Dashboard containing option of • New Application request • Status Inquiry • Application history • Information related to schemes, benefits, notices, notifications etc.
4.	The systems should allow change of first password mandatorily for first time login and should also provide change password option along with security question options in case of a forgot password scenario

9.1.6 Data Repository

Sr	Functional Requirement
1	The system should allow to store the digitally signed and issued certificates and letters
2	The system should allow the retrieval of the stored certificate/communications etc. as per the authorization
3	System should not allow modification of stored data
4	System should allow smart search for the stored documents
5	System to keep a track of the user details who access or download the stored documents
6	A repository to store all the notices/circulars/orders of each department. Departments will have a username and password to store the documents which can be retrieved later on.

9.1.7 FRS for Common Functionalities

9.1.7.1 Information Provision

The information provision component is envisaged for facilitating the dissemination of information. It had been observed that Information dissemination has been a key impediment in availing services in the current scenario. Lack of information regarding the processes and the supporting documents was among the key deterrent or the prime reason why citizens/business couldn't avail services.

Information dissemination would be a priority while dealing on G2C, G2B & G2G front. The Information provision component would help citizens avail all basic information regarding the G2C services being provided by the Portal, to effectively execute the

information provision component, Application Vendor/content uploading agency will be vested with the responsibility of uploading the information on the Portal/ application. The following information shall be included in the Information provision component:-

- Procedural information related to services
- Service fee
- Required supporting documents and form
- Service levels for the delivery of service
- Process to validate authenticity of the documents
- Escalation matrix

The Application Vendor will accept only duly signed documents from the authorized persons in various departments for updating on the website. The various head of departments or the authorized persons in those departments will draft the content and be responsible for the same.

Functional Requirements

Sr	Description
1.	The system should allow only the officials to update information obtained from the departments
2.	The system should provide detailed information on the following to the user: i. Type of Service ii. Eligibility Criteria iii. Nodes of obtaining service iv. Application Fees v. Grievance filing procedure vi. Authorities to contact vii. Forms and documents required
3.	The system should be able to add new information components besides the above
4.	The system should be accessible to citizens, department officials, other government officials etc.
5.	The system should have the functionality to provide role based access to various modules/information/repository/Users
6.	The Department should be able to update the document over the application but this information would not be viewable to the end user until the department head puts his digital signature verifying its authenticity and correctness.
7.	The system should not allow any unauthorized user to upload information besides designated Department officials

Sr	Description
8.	The system should notify the Department Head once the information is updated over the application
9.	The system should allow the Department Head to either approve or reject the information update
10.	The system should update information over the system only after digital signature of the department head has been put up on the information update
11.	The system should ask for digital signature of the department head in case of rejection also.
12.	The system should ask for desired changes from the Department Head in case of rejection by the department head
13.	The system should notify the Department officials both in case of acceptance or rejection of the information update
14.	The system should allow only the Department officials to make changes in the updated information hosted over the application
15.	The system should request Department official to put his digital signature after each updation
16.	The system should have a counter at the bottom of the page to record the number of people visiting the website so as to estimate the usefulness of information in terms of number of users
17.	The system should auto generate grievances in case of Department Head or Department officials are not performing against their agreed service levels
18.	The system should support multi-lingual interface as per localization and language technology standards

9.1.7.2 Form Availability

All services rendered by Mizoram e-Services Portal would be initiated with the application form submitted by citizen. Hence availability of application forms is a critical success factor which has been diligently re-engineered and shall be a core G2C, G2B & G2G component.

All services being rendered under the Application would be required to have standardized application forms. These forms should be easily available to citizens. Citizens must be able to easily access or download the most recent version of the application form. Citizen through authorized user of would be able to upload the filled forms in the Application.

Various head of departments or authorized persons of those departments will make sure that any change in the Performa of the form is immediately notified to the Application Vendor who will then manage the updating of the form.

Functional Requirements

Sr	Description
1.	The system should store all the service request forms at predefined location for the selected services
2.	The system should be able to retrieve all service request forms from the predefined location
3.	The system should ensure that service request forms are easily downloadable in both PDF, HTML and word format
4.	The system should provide for printable versions of the service request forms
5.	The downloaded form should have all required field validations and the input fields should be editable in the form
6.	The system should give an error message in case it is not able to retrieve the application from the given location
7.	The system should have a provision for uploading new version of the forms as and when it is required to change the version
8.	The system should maintain the version control for the service request form
9.	The system should have a security feature embedded for changing the version of the form and should allow only predefined process owners to change the form version
10.	The system should maintain log for all version change with the details of the process owner making version change
11.	The system should not allow to change the content of the form and should be in read only version
12.	The system should facilitate the availability of service request forms through a. Online / website b. CSC
13.	The system should allow for easy searching of the service request forms
14.	The system should have an easy and user friendly layout for locating the service request forms
15.	The system should be able to export forms in multiple formats so as to ensure compatibility of forms
16.	The system should have a life counter feature to keep track of number of forms being downloaded from the application
17.	The system should support multilingual/Unicode interface as per Localization and Language Technology Standards.

9.1.7.3 Application Receipt

All services rendered by the Application would be initiated with the structured input submitted by citizen at CSC or portal.

Citizen/Business through authorized user at department would be also able to apply for service through the Application.

Various head of departments or authorized persons of those departments will make sure that any change in the supporting documents or mandatory field or fees shall be updated to the system through Application Vendor.

Functional Requirements

Sr	Description
1.	The System should enforce secure login as per the Login process
2.	The System, on successful login, should display the Main page or the Home page of the Applications Services Request with links to various services as per the Service Request Form.
3.	The System should be able to retrieve and load the online Application Form for the service as selected by the Applicant / Operator.
4.	The System should assign Unique Acknowledgment identification Number (AIN) to every form.
5.	The System should allow the Operator / Applicant to take a printout of the form before submitting it.
6.	The System should allow editing of the details in the online Application form even after a printout has been taken.
7.	The System should allow the Operator / Applicant to attach any scanned documents or any other supplementary attachments as required with the Application Form
8.	The System should allow the operator/applicant to submit the Application Form online
9.	The System must display a message for Successful or Unsuccessful submissions and it should log all such events
10.	The System must refresh the page and Load a new Application form in case the previous submission attempt was unsuccessful
11.	The System should save the Application Form and all attached documents into a Database
12.	The System should be able to generate a Receipt for the Applicant, and allow it to be printed along with alerts and notification

13.	The system should allow the applicant to raise query against the AIN number to the department owners/officials directly through their login
14.	The system should support multilingual interface as per Localization and Language Technology Standards
15.	The Application must support Digital Signatures of any of the Certifying Authorities registered under the Controller of Certifying Authorities, and must be modifiable as per the changes made by the respective Certifying Authorities on the structure of the Digital Signatures issued by them
16.	The Digital Signatures used and the Application must provide the Time Stamping of the act of Digitally Signing a document as mandated by the IT Act 2000.

9.1.7.4 Delivery Mechanism

The Delivery Component shall be used for delivering the output of the service request to the applicant. This will include receiving the processed application/license from the concerned line departments, application status, issuing the license and updating the application status against the AIN.

Printed copies of digitally signed documents should be made valid.

Functional Requirements

Sr	Description
1.	The system should be able to provide delivery against all service requests as required
2.	The system should be able to link delivery against specific service request through unique AIN
3.	The system should allow delivery only when the service request has been either approved / rejected
4.	The system should allow only validated predefined users to log into the Application for retrieving the delivery against the service request. The system should allow the delivery of outputs through email as well.
5.	The system should allow downloading of service delivery output only after matching the digital verification
6.	The system should provide the printable version of the service output
7.	System should prompt the user to validate the digital signature first before printing to avoid error on printed output
8.	The system should print unique AIN on every service output generated through it

9.	The system should print the URL of the site from where the content of the service delivery may be verified
10.	The system should be able to maintain the database of all service delivery output in a logical manner to ease the retrieval of the same as and when required
11.	The system should have a counter to keep log of all delivery made with specific association of unique AIN
12.	The system should support multi-lingual interface as per localization and language technology standards

9.1.7.5 Rejection

The Application Rejection Component shall be used in case if applications are rejected at any point during the processing of the request. This shall make it mandatory for the authorities to cite the reason for rejection and upload the application rejection report & application status against the AIN in the Application. Applicant shall also be informed about the application rejection status via Notification SMS/Email.

Purpose of including this component in the FRS is to

- Make the G2C ,G2B & G2G service system more transparent & accountable\
- Providing reasons for rejection of application to the applicant
- Allow the officials to formally reject an application if it does not meet the desired criteria

Functional Requirements

Sr	Description
1.	The system should allow authorized users to login to the system for rejecting the service request based on rejection criteria as mentioned for the service through a valid user ID and password
2.	The system should show a login failure screen in case the user name and password are not verified by the Application
3.	The system should have a provision where the predefined process owner states the reason for rejection of the service request
4.	The system should reconfirm from the user for initiating the digital signing before actually initiating the process
5.	Upon digitally signing the document, digitally signed document should be saved in the given repository for future references and a hard copy of the same document should be generated for the applicant
6.	System should not allow the user to make any alteration in the digitally signed document or access the database only on entering the unique encrypted key/code

7.	System should display an appropriate message in case of retrieval failure or any other communication failure or in case the document could not be found due to any reason
8.	The system should allow the user to terminate the rejection process at any point of time during rejection
9.	The system should keep and maintain the data in a data repository (database) for all the rejection made
10.	The system should keep the records of all transaction performed and link it to the unique code of digital signature
11.	The system should open a page informing the user of successful completion of rejection function
12.	The system should not allow the user to modify the rejection once it has been digitally signed
13.	The system should not allow the user to delete any service request pending for approval at his end

9.1.7.6 Digital Signature & Notification

The Notification component will provide alerts and notices to Applicant and concerned officers on activity like submission, rejection and delivery.

Functional Requirements

Sr	Description
1.	The Digital Signatures used and the Mizoram e-Services Portal Application must provide the Time Stamping of the act of Digitally Signing a document as mandated by the IT Act 2000
2.	The system should intimate the users through predefined channels for pending service request application on a daily basis
3.	Application should be able to populate the Dashboard for the concerned officer about the New Application, Pending application.
4.	The Application should be able to notify the Applicant by SMS or email as required and applicable whenever status of application change or any information is passed like clarification required, information not received etc.
5.	The application should be able to fetch the mobile no and other details of the applicant for the necessary action

9.1.7.7 Status Tracking

The objective of this component is to keep track of the service levels of the various processes involved in a given service. This component shall be beneficial for two categories of users i.e. Applicant & Departmental users. These users would be able to track status of the request with help of the Acknowledgement identification number generated for the service request.

Each application by an applicant will be logged against a unique Acknowledgement identification number generated at the time of application submission and given to the applicant for future references and status tracking.

The purpose of the component is as follows:

- To ensure transparency in service processing by the government to the citizen/business for the service request made.
- To establish the validity and sanctity of the well-defined service level.
- To ensure and define responsibility and ownership of the actors towards service delivery.

Whenever the detects an SLA being exceeded, it should automatically escalate the issue to a higher authority as per a defined escalation matrix.

Functional Requirements

Sr	Description
1.	The system should keep track of all the service requests from the citizens/business along with the respective unique application reference id generated at the time of application receipt
2.	The system should be able to keep track of the status of all service requests with the help of the respective unique AIN and map the current status with the pre-defined service level against each process.
3.	The system should be able to detect any change in the status of a given unique AIN
4.	In case there is a change in the status of an application , the system should update the status information in the database
5.	The system should have provisions for intimating the applicant about the current status of his/her application
6.	The system should not provide details about the internal service levels to the applicant and only provide update about the status with respect to the final delivery. This feature should also allow the system to update the applicant if there is any change in the service level of the final delivery
7.	System should display the link for the Application portal from where the applicant can retrieve the status information by entering the AIN
8.	The system should also allow the applicant to retrieve update about his/her service request by sending a SMS containing the AIN

9.	System should display the number from where the applicant can retrieve the status information by sending SMS along-with the AIN
10.	The system should display an appropriate message if the system is unable to retrieve the details due to any reason like connectivity issues, maintenance issues, etc. and also provide contact details of the system administrator and alternate link (if available)
11.	The System should have Side Menu on each page so as to reflect the contents of the containing directory, making it easier to navigate the site and locate the link for retrieving update against a given reference id
12.	The system should be adequate security features built in the architecture of the system to ensure that it cannot be hacked or manipulated
13.	The system should not allow the users to edit the details of the application upon retrieving the status update against a given reference id
14.	The System should allow the end user to print the status update information if the applicant is retrieving the status through the portal or email
15.	The system should allow the applicants to send specific application related query through the AIN in portal
16.	The systems should allow the users to respond the specific query through AIN to the applicant and the same should be done with alert and notification

9.1.7.8 Payment Component

The Payment Component shall be used for accepting any kind of service related payments for application fees or service delivery. This component shall also account for the fund flows from the collection points to the concerned departments where the payments need to be deposited. Purpose of including this component in the framework is to:'

- Citizens/Business pay only what is defined as per the charter
- Provide Secure and trusted process of payment collection and deposit in the respective account for respective services and account the same
- All payments shall have authorized acknowledgements
- The system should have all the standard features for a secure transaction while integrating with payment gateway

Functional Requirements

Sr	Description
1.	The system should allow financial transaction functions
2.	The system should check for all details of the service request form before initiating the payment

3.	The system should enable the payment option only when all the fields of service request forms are filled
4.	The system should return back and highlight the field which have inconsistencies / error for user to rectify the error
5.	The system should retain all the information of the service request form besides those having inconsistencies
6.	The system should open a new page for recording payment details against the service request
7.	The system should allow payment to be registered on the service application request against the following: a. Payment against the service b. Payment against the dues / payments as defined
8.	The system should record and maintain all details of payment against a AIN and account details
9.	The system should be able to maintain all the payment records in a database and retrieve the same as and when record
10.	The system should able to record specific payment details on the service request form after successful payment has been made
11.	The system should have the facility to refund the fees collected online/offline as applicable
12.	The system should support multilingual interface as per Localization and Language Technology Standards
13.	The system should allow online transaction through approved financial instruments a. Credit cards b. Debit cards c. Net banking
14.	On-line payment – The System should support online payment, including the following fields: a. Facilitate payment against dues and recoveries online through a payment gateway interface with a bank b. Allow the user / customer to make payment only till the last date of payment has not passed. c. Facilitate automatic updation of the information on the applicant record, upon realization of the submitted money
15.	The system should ask for the final confirmation from user before initiating payments function

16.	The system should allow for user re-verification before initiating payment function through transaction unique ID allocated to the user
17.	The system should provide for migration to a secure payment gateways from the portal in a secured manner
18.	The system should allow predefined data / information to be provided to payment gateways
19.	The system should be able to generate unique ID codes for every transaction
20.	The system should be able to correlate and confirm a. User data / information through unique ID code generated b. Payment gateway data information through Unique ID code
21.	The system should provide printable version of receipt
22.	The system must not store any critical information of the user provided on the secured payment gateway
23.	The system should allow for data / information transfer / flow to the Application
24.	The Application should facilitate automatic updation of the information on the applicant record on successful payments made
25.	The system should not allow any initiation of payment function beyond prescribed date for transaction. The system should provide user friendly information for such transactions
26.	The system should provide for database security
27.	The system should provide for application security
28.	The system should follow predefined payment rules and regulation as defined from time to time in the Application
29.	The confirmatory receipt issued should have a unique registration number against the transaction
30.	The system should maintain records of such transaction for users accounts respectively
31.	The system should allow for printable version of the confirmatory receipt for all such successful transactions
32.	The system should be able to send emails on registry value of the user account on the payments
33.	The system should maintain all information and records of user transaction tagged to the user account and also provide for viewing of such information as and when required by the user

34.	The system should not allow any changes to be made by the user into the following: a. Past records b. Ongoing transaction once confirmation on initiation of such a transaction is given by the user c. Any values maintained for such transaction
35.	The system should be compatible for easy integration with accounting and financial application either inbuilt at a later stage into the portal or external with an interface with the portal
36.	The system should allow updation of manual deposits for any receipt
37.	The system should allow the authorization by competent authority before initiating the payment process
38.	The system process the payment disbursement requests in batch through a payment gateway and update the Application
39.	The system should auto update the payment details in the respective cases with information like payment ID no, transaction date, time etc.
40.	The system should store the payment information in database and should allow to generate required reports
41.	The system should send the notification about failed transactions along with reason and update the same in the system

9.1.8 FRS for Transaction Services

The measure of success the project is the number of transactions carried out through the application. Hence, it is important for all the stakeholders to align the project objectives to number of transactions happening through the portal, per day, per month and per year.

The e-services will have to be integrated with the eTaal portal developed by NIC (http://etaal.gov.in), which is the web portal for dissemination of e-Transaction statistics of Central & State level e-Governance projects including Mission Mode Projects.

The SI may get in touch with the eTaal team at NIC HQ for initiation of the service integration process.

For the transactional services, the functional requirement specification will be same for all the services. The forms after finalization with the line department will contain certain fields including attachments in .pdf, .jpg etc format which will be submitted. Two levels of user will be at the department i.e: verification and approval. The verifier will check the content of the forms with the attachment and if satisfied forward the application for approval. The approver will approved the application and attached digital signature (if required). The acknowledgement and approved notification will be sent to the applicant.

9.2 Upgradation of Mizoram SDC

9.2.1 General Requirements

SL. No	Requirements
i.	The Solution should be capable of allowing applications to self-service compute, network and storage infrastructures automatically based on workload demand
ii.	The Solution should be capable of decoupling applications and application infrastructure configurations in portable containers called images
iii.	The Solution should be able to provide a secure global object store capable of storing variety of objects including files, images and videos or any arbitrary unstructured data
iv.	The Solution should be able to isolate and allow secure authenticated access to infrastructure services
v.	The Solution should be hybrid cloud ready for Disaster Recovery and Business Continuity using portable application containers programmable via APIs
vi.	The Solution should be capable of orchestrating compute and storage resource placements based on flexible policies to maximize hardware utilization
vii.	The Solution should be able to abstract compute, network, and storage resources for the application and user self-service regardless of hypervisor, server, network and storage hardware
viii.	The Solution should be capable of supporting multi-tenancy to run cloud services (compute, network, storage) for multiple consumers on a single platform while dynamically and automatically managing the isolation of virtual machines into secure pools. This functionality should be exposed via API
ix.	The Solution should support 3rd party cloud management solutions and have an API that allows for custom development
x.	The Solution should be able to provide workload migration, orchestration, interoperability between private and public clouds (like auto-scaling, cloud-bursting)
xi.	The Solution must support standards-based REST and SOAP interfaces
xii.	The Solutions should be deployable on a wide variety of open source and proprietary host Operating Systems
xiii.	The Solution should support open format

9.2.2 FRS for Cloud Enablement

9.2.2.1 Server Virtualization Functional Capabilities

SL. No	Requirements	Compliant/ Non-Compliant
1	**Hypervisor**	
i.	The Virtualization software should be based on hypervisor technology which sits directly on top of Hardware (Bare Metal)	
ii.	The Solution should be able to run various operating systems like windows client, windows server, linux, solarisx86, novel netware and any other open source	
iii.	The Solution should have the capability for creating Virtual Machines templates to provision new servers	
iv.	The Solution should continuously monitor utilization across Virtual Machines and should intelligently allocate availableresources among the Virtual Machines	
v.	The Virtualized Machines should be able to boot from iSCSI, FCoE and fiber channel SAN	
vi.	The Virtualized Infrastructure should be able to consume Storage across various protocols like DAS, NAS, SAN	
vii.	The Solution should allow for taking snapshots of the Virtual Machines to be able to revert back to an older state, if required	
viii.	The Solution should be able to dynamically allocate and balance computing capacity across collections of hardware resources of one physical box aggregated into one unified resource pool	
ix.	The Solution should cater for the fact that if one server fails allthe resources running on that server shall be able to migrate to another set of virtual servers as available	
x.	The Solution should provide support for cluster services between Virtual Machines	
xi.	The Solution should provide patch management capabilities such that it should be able to update patches	

SL. No	Requirements	Compliant/ Non-Compliant
	on its own hypervisor and update guest operating system through the existing EMS	
xii.	The Solution should provide the monitoring capabilities for storage, processor, network, memory so as to ensure that themost important Virtual Machines get adequate resources even in the times of congestion	
xiii.	The Solution should support Live Migration of Virtual Machine from one host to another	
xiv.	The Solution should deliver above listed Hypervisor capabilitiesusing standard server infrastructure from at least HP, DELL, IBM, Cisco and Oracle	
2	**Compute**	
i.	The Software should have the capability to create Virtual Machines with required number of vCPUs	
ii.	The Solution should allow Virtual Machines consume RAM dynamically in such a way that if some of the VMs in Physical machine are not utilizing the RAM, this RAM can be utilized by some other VM in the same physical machine which has a requirement	
iii.	The Solution should be able to use power saving features like, in case of off-peak hours, if not all servers are required to be powered on, the solution should shut down to save power	
3	**Storage**	
i.	The Solution should also integrate with FC, FCoE and iSCSI SAN and infrastructure from leading Vendors so as to leverage high performance shared storage to centralize Virtual Machine file storage for greater manageability, flexibility and availability	
ii.	The Solution should have the ability to thin provision disks to avoid allocating all storage space upfront	
iii.	The Solution should provide the capability to migrate the Virtual Machine files from one storage array to another storage	

SL. No	Requirements	Compliant/ Non-Compliant
iv.	The Solution should deliver above listed capabilities with HP, EMC, IBM, SUN, NetApp and Hitachi	
4	**Network**	
i.	The Solution should allow configuring each Virtual Machine with one or more virtual NICs. Each of those network interfaces can have its own IP address and even its own MAC address	
ii.	The Solution should allow for creating virtual switches that connect virtual machines	
iii.	The Solution should support configurations of 802.1 q VLANs which are compatible with standard VLAN implementations from other vendors	
iv.	Solution should take advantage of NIC Teaming Capabilities	
v.	The Solution should deliver above listed all network capabilities with at least Cisco, Juniper and 3COM	
vi.	The Solution should have the capability for moving Virtual Machines from Primary site to the Secondary site.	

9.2.2 Security Capability in Cloud

SL. No	Requirements	Compliant/ Non-Compliant
1	**Security Capabilities**	
i.	The Solution should offer Automated and Approval based Upgrades for Virtual Machines delivering cloud infrastructure	
ii.	The Solution should able to extend existing malware protection solution in SDC for Virtual Machine	
iii.	The Solution should be able to provide existing Host Firewall protection for the virtual machine also	

SL. No	Requirements	Compliant/ Non-Compliant
iv.	The Solution must offer Identity, Authentication and Role based access to User Departments Infrastructure - Machines (Virtual or Physical), Application or Common Services	
v.	The Solution must offer Policy based administration by putting User Departments Machines (Virtual or Physical) in logical groups and apply relevant policies	
vi.	The Solution should have the ability to not just enforce policies but also track and report non-conformance to access	
vii.	The Solution should generate reports on non-conformance and escalation for privileged access by unauthorized roles/ identities	
viii.	The Solution should support VLAN isolation by supporting multiple networks per resource pool	
ix.	The Solution should support encrypted communication between cloud framework and all target systems	
x.	The Solution should provide security on the hypervisor, as well as guest VMs. It should provide the ability to apply security to virtual machines and security policies that can follow the machines as they move in the cloud. It should provide policy control and security to support cloud service delivery	
xi.	The Solution must offer ability to move in both virtual and physical (P2V and V2P)network by the cloud Administrator	
xii.	The Solution must offer ability to utilize existing Intrusion detection System / Intrusion Protection system to seamlessly extend into Virtualization environment	

9.2.2.2 Service Provisioning Capabilities

SL. No	Requirements	Compliant/ Non-Compliant
1	**Security Portal Capabilities**	

SL. No	Requirements	Compliant/ Non-Compliant
i.	The Solution should provide a simple to use intuitive Web and experience for SDC Cloud Administrator and User Departments	
ii.	The Solution should have self-service capabilities to allow Users Departments to log service requests - in SDC The Solution should use cloud helpdesk for logging call and maintaining escalation and in addition provide e-mail /SMS alerts to existing helpdesk for maintaining record The Solution should be able to allow extension of the existing EMS Solutions available at the SDC to cover cloud environment (CA, HP, IBM) while permitting cloud EMS to function independently in monitoring Cloud environment required to manage cloud functionality	
iii.	The Solution should be able to offer choice of various Service offering on multiple hypervisors (such as XEN, Hyper-V, VMware) with an option to select multi operating systems such as Windows 2003, 2008, RHEL / SUSE Linux, etc., VLAN, Storage and quickly compute associated price for the same as well as shows the deduction for overall Tenant approved infrastructure Quota	
iv.	The Solution should offer Service catalog listing availability of Cloud infrastructure like Virtual Machines, Physical Machines, Applications, Common Services offered by State Private cloud	
v.	The Solution should provide comprehensive service catalog with capabilities for service design and lifecycle management, a web- based self-service portal for users to order and manage services	
vi.	The Solution should offer Registration, Signup, Forgot Password and other standard pages (Profile, Billing or Contact information)	
vii.	The Solution should enforce password policies (complex password, change password in some days etc)	
viii.	The Solution should be able to offer choice of various hardware profiles, custom hardware profile, Selection of operating systems, VLAN, Storage	

SL. No	Requirements	Compliant/ Non-Compliant
ix.	The Solution should automate provisioning of new and changes to existing infrastructure (Virtual, Physical, Application or Common Services) with approvals	
x.	The Solution should allow creation of library hosting various Operating System, Databases that can be selected while creating new virtual servers	
xi.	The Solution should track ownership and utilization of virtual machines, Physical machines, applications and common services	
xii.	The Solution must provide the capability to support the following Service Request Types or reasons for contact: **Provisioning** of Commuting Infrastructure - Virtual, Physical or Applications **Repair** (New, Cancellation, Change, Status Update) for the above infrastructure **Enquiry** (New, Cancellation, Change, Status Update) **Customer Complaint** (New, Cancellation, Change, Status Update) **Order** (Feasibility, Provide, Cease, Change, Amend, Cancel, Reconnect, Status Update)	
xiii.	The Solution should allow for implementing workflows for provisioning, deployment, decommissioning all virtual and physical assets in the cloud datacenter	
xiv.	The Solution should allow easy inventory tracking all the physical & virtual assets in the Private Cloud	
xv.	The Solution should employ Role Level Access Control with the ability to central manage Roles and Identities in an LDAP based Identity Store	
xvi.	The Solution should have the ability to manage Virtual Assets across the major multiple virtualization platforms (Microsoft, VMware, Zen)	
xvii.	The Solution should be able to manage virtual and physical assets across multiple Private Clouds - implying that a specific Cloud should have the ability to get resources from other Clouds	

SL. No	Requirements	Compliant/ Non-Compliant
xviii.	The Solution should allow the ability to identify non-compliant systems (both Virtual and Physical) in terms of Desired Configuration (e.g. Lack of a Firewall or a file system policy on a VM etc.) and automatically remediate the same wherever possible	
xix.	The Solution should have Show-Back (to check the usage patterns and reporting for the user department) and the same solution should have the capability to be updated into Charge-Back whenever this functionality is required by the SDC	
xx.	The Solution should offer usage report by tenant, by region, or by virtual machine reporting usage of memory consumption, CPU consumption, disk consumption, Network & Disk IO	
xxi.	The Solution should offer usage report by tenant, by region, or by Virtual Machine reporting usage of memory consumption, CPU consumption, disk consumption, Network & Disk IO	
xxii.	The Solution should have web based interface for administration	
xxiii.	The Solution should have the ability generate customize report as well as the native ability to export to common formats	
xxiv.	Whenever the Charge Back mechanism is enabled, the Solution must satisfy the following requirements: The Solution should support different cost models like allocated or reserved cost per virtual machine. It should also allow tracking usage of resources The Solution should allow mixing of different cost model/ policies The Solution should have the ability to charge differently for different level of services The Solution should support cost calculation of shared/ multi-tenant application	
2	**User Department Requirement**	

SL. No	Requirements	Compliant/ Non-Compliant
i.	The User Departments should be able to view Department's infrastructure as Services e.g.: group his servers by-application LOB servers, All web servers, all Small servers etc.	
ii.	The User Departments should be able to select between a managed infrastructure or an unmanaged infrastructure. (e.g. who will manage the Patched Updations on virtual machines)	
iii.	The Solution should allow User Departments to delegate user services to others on their team	
iv.	The User Department should be able to allocate, monitor, report and upgrade allocated capacity	
v.	The Solution should give User Department capability to view logged, Queued, Assigned solved or Resolved queries	
vi.	The Solution should allow selecting various Operating System as well as option of Installing additional software's on the provisioned Virtual Machines to User Department while Requesting for provisioning of new virtual servers from Self service GUI	
vii.	The User Department should be able to report Department's allocated Quota, Used Quota and balance Quota of infrastructure capacity	
viii.	The User Department should be able to generate consumption reports for Department's cloud infrastructure (Virtual, Physical, Application or Common Services)	
3	**SDC Private Cloud Administrator Requirement**	
i.	Administrators should be able to automatically scale and/or manage resources unilaterally (as also termed in the NIST definition) for tenant services without manual intervention as and when required by the SLA requirements of the service	
ii.	The Cloud Automation framework should provide capability for Roll based Access for performing specific tasks	
iii.	Private Cloud Administrators should be able to easily configure, deploy, and manage services through a highly	

SL. No	Requirements	Compliant/ Non-Compliant
	intuitive service- centric interface, while using a library of standard templates	
iv.	Private Cloud Administrators should be easily be able to take resources offline and online	
v.	Private Cloud Administrators/Application Owners should be able to create, manage, services using a web-based interface that presents a customized view of resources based on your role in the organization	
4	**Capacity Management**	
i.	The Solution should be able to determine how many more virtual machines can fit the environment	
ii.	The Solution should identify idle, underutilized capacity to provide inputs to the capacity management function such that informed decisions can be taken	
iii.	The Solution should support to identify and determine optimum sizing and placement of virtual machines	
iv.	The Solution should provide forecast reports demonstrating forecasted utilization	
v.	The Solution should support all of the following modeling scenarios: Physical to Virtual, Virtual to Virtual, Virtual to Physical, Virtual to SDC private Cloud, and Test to Production	
vi.	The Solution should provide a mechanism to automatically assess high volumes of workloads and determines optimal placement on virtual machines across the enterprise's shared resource pools	
vii.	The Solution should be able to extend existing tools functionality to virtual environment as well from leading vendors like CA, Microsoft, IBM and HP	

9.2.2.3 Automation, Orchestration and Monitoring

SL. No	Requirements	Compliant/ Non-Compliant
1	**Process Automation**	
i.	The Solution should demonstrate a way to comprehensively model cloud datacenter process end to end across multiple Vendors software and hardware thus enforcing Operational Best Practices and Procedures	
ii.	The Solution should be integrated to existing ITIL Service Support Areas functions including but not restricted to Event Management, Incident Management, Request fulfillment, Problem Management, Access Management	
iii.	The Solution should allow automating best practices, such as those found in Information Technology Infrastructure Library (ITIL) through workflow processes that coordinate management tools to automate incident response, change and compliance, and service-lifecycle management processes	
iv.	The Solution should have capabilities to create workflows to automate common admin challenges	
v.	The Solution should have the ability to develop highly customized workflows and easy user interface.	
vi.	The Solution should have web-based interface	
2	**Integration Capabilities**	
i.	The Solution should be able to create processes across multiple vendors' software and hardware	
ii.	The Orchestration Solution should be open and interoperable and has rich integration capabilities that support interfaces from command line interface and web services	
iii.	The Solution should be capable of extending entire functionality to virtual environment utilizing existing components of SDC such as Enterprise Management System (EMS)	
iv.	The Solution should provide resource-level operations across compute resources (IBM, Cisco, HP, Dell, Oracle and/or other hardware), hypervisors (VMware, Xen, Hyper-V), storage resources (EMC, Netapp, IBM, HP, Oracle), and	

SL. No	Requirements	Compliant/ Non-Compliant
	network resources (3Com, Cisco, Juniper). It should support provisioning for multiple platforms including Windows, Linux, & ESX on x86 (32 and 64 bit)	
v.	The Solution should be able to extend (through emails/ hyperlink/ SMS) the existing helpdesk of the SDC for Call Log and escalation maintenance	
vi.	The Virtual Machine should be able to be monitored from the existing EMS solution available in SDC	
vii.	The Solution should provide capability for orchestrating tasks across systems for consistent, documented, compliant activity	
viii.	The Solution should possess capabilities to extent resource & cloud fabric management onto other Private Clouds	
ix.	The Solution should be able to move identified workloads to another private cloud	
x.	The Solution should be able to give back its capacity that can be used by other private cloud	
xi.	The Solution should be able to audit and monitor execution of processes and report on violations against the same	
xii.	The various participating HW & SW components in the Data Center process as modeled by the solution should be easily manageable by this Orchestration layer	
xiii.	The Solution should provide a set of adapters that should be able to utilize existing infrastructure elements and IT service management tools to provide smooth, precise orchestration of automated processes	
xiv.	The Solution should be able to accelerate adequate utilization of subsystems (not limited to but including) the backup solution, the service manager/helpdesk module, the operations modules, the virtual asset provisioning modules etc.	
3	**Monitoring Capabilities**	

SL. No	Requirements	Compliant/ Non-Compliant
i.	The Solution should be able to monitor User Department Virtual Resources independent of the platform & solution/service they are running	
ii.	The Solution should be able to monitor key performance characteristics of the virtual resource (OS, RDBMS, Memory, Storage, Network etc.)	
iii.	The Solution should monitor all the critical operating system level services and should check for their status like running, not running, paused. In addition, deviations from a Desired Configuration should be detectable and reported	
iv.	The Solution should give User Department ability to select performance counters and duration for which they want to view the performance data	
v.	The Solution should have the mechanism to store the historical data for problem diagnosis, trend and analysis	
vi.	The Service level dashboard provided with the Solution should have a web-based interface	
vii.	The Solution should be able to send the reports through e-mail to predefined user with pre-defined interval	
viii.	The Solution should be able provide hyperlink/e mail/SMS alerts to the existing helpdesk system for incidents in SDC	
ix.	The Solution should trigger automated actions based on incoming events / alerts	
x.	The Solution should provide a Knowledge base to store history of useful incident resolution	

Section – X

Format for Response to the Tender: Pre- Qualification Bid

Section X. Format for Response to the Tender: Pre- Qualification Bid

This section provides the outline, content and the formats that the Bidders are requiredto follow in the preparation of the Pre-Qualification Bid

Format 1 – Pre-Qualification Bid Letter

To,

The Chief Executive Officer,
Mizoram State e-Governance Society
Directorate of Information and Communication Technology
Old Secretariat Building I, Treasury Square,
Aizawl, Mizoram.

Sir,

Subject: Appointment of an Agency for Upgradation of Mizoram SDC into Cloud Environment and Operational Maintenance

Reference: Tender No: **<Tender Reference Number>** Dated <dd/mm/yyyy>

We, the undersigned Bidders, having read and examined in detail all the Tender documents do hereby propose to provide the services as specified in the Tender document number **<Tender Reference Number>** Dated <dd/mm/yyyy> along with the following:

a. Earnest Money Deposit (EMD)

We have paid an EMD of ₹ 15,00,000/- (Rupees Fifteen Lacs only) through the portal (https://mizoramtenders.gov.in/). This EMD is liable to be forfeited in accordance with the provisions of the Section VII - General Conditions of the Contract.

b. Contract Performance Guarantee Bond

We hereby declare that in case the contract is awarded to us, we shall submit the Contract Performance Guarantee Bond in the form prescribed in Section XIII Annexure 1: - Proforma of Bank Guarantee towards Performance Security and as per Section VII - General Conditions of Contract.

We hereby declare that our Bid is made in good faith, without collusion or fraud and the information contained in the Bid is true and correct to the best of our knowledge and belief.

We understand that our Bid is binding on us and that you are not bound to accept a Bid you receive.

Thanking you,

Yours faithfully,

(Signature of the Bidder)

Name

Designation

Seal

Date:

Business Address:

Format 2 - General Information about the Bidder

Details of the Prime Bidder (Company)				
1.	Name of the Bidder			
2.	Address of the Bidder			
3.	Status of the Company (Public Ltd/ Pvt. Ltd)			
4.	Details of Incorporation of the Company		**Date:**	
			Ref. #	
5.	Details of Commencement of Business		**Date:**	
			Ref. #	
6.	Valid Sales tax registration no.			
7.	Valid Service tax registration no.			
8.	Permanent Account Number (PAN)			
9.	Name & Designation of the contact person to whom all references shall be made regarding this tender			
10.	Telephone No. (with STD Code)			
11.	E-Mail of the contact person:			
12.	Fax No. (with STD Code)			
13.	Website			
14.	**Financial Details (as per audited Balance Sheets) (in crore)**			
	Year	**2019-2020**	**2020-2021**	**2021-2022**
A	Net Worth			
B	**Turnover**			

Format 3 – Pre-Qualification Criteria

SL. No.	Clause	Documents Required	Reference
1.	The Bids should be submitted by only the prime Bidder; no consortium is allowed in this Bid	Declaration in this regard needs tobe submitted	
2.	The responding firm / agency should have submitted a **Bid Security** (EMD) of ₹15,00,000 (Rupees Fifteen Lakhs) only.	Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee from any of the Commercial Banks valid for a period of 45 days beyond the final bid validity period.	
3.	Legal Entity Company should be registered under Companies Act, 1956 or 2013. Registered with the Service Tax Authorities	Certificate of Incorporation. Registration Certificate	
4.	The Bidder should have positive net worth of ₹25 crores as on 31st March 2023 viz; 2020-21,2021-22 and 2022-23	Certified Audited Balance Sheets of relevant periods and a certificate from the Chartered Accountant / Cost Accountant indicating the net worth for the relevant period shall be submitted with the bid. viz 2020-21, 2021-22 and 2022-23 Note: 2022-23 Provisional Balance Sheet also accepted	
5.	The Bidder's average annual turnover should be more than ₹40 crores in each of the last three financial years viz;2020- 21, 2021-22 and 2022-23 Note: The turnover refers to the Bidder's firm and not the composite turnover of its subsidiaries/sister concerns etc.	Certified Audited Balance Sheets of relevant periods and a certificate from the Chartered Accountant / Cost Accountant indicating the turnover details for the relevant period shall be submitted with the bid. viz 2020-21, 2021-22 and 2022-23 Note: 2022-23 Provisional Balance Sheet also accepted	

SL. No.	Clause	Documents Required	Reference
6.	Bidder should have experience of supply, installation,commissioning and annual maintenance services for IT Infrastructure projects and shouldhave been in the business for a period exceeding three years as on 31.03.2023	Copies of relevant P.O./ Work Order/ Supply Order/ Agreement confirming year and area of activity	
7.	Bidder should have experience of end-to-end application development at Enterprise level in Government Sector & database migration /upgradation / application development project with an order value of ₹ 4 Crore and should have been in the business for a period exceeding five years as on 31.03.2023	Copies of relevant P.O./ Work Order/ Supply Order/ Agreement confirming year and area of activity and Completion / Performance / Go Live Certificate	
8.	The Bidder must have implemented/ commissioned at least one Cloud Implementation / HCI Implementation in Data Centre in India as on 31.05.2023 (In case of Cloud Experience: Cloud Implementation for providing Cloud based services in their own Data Centre or on to the customer Data Centre shall be considered)	a. Copies of relevant P.O./ Work Order/ Supply Order/ Agreement confirming year and area of activity and Completion / Performance / Go Live Certificate b. Valid Work Order and Certificate from the Client in case implementation/ commissioning in Client Data Centre OR a. Declaration from the Company Secretary confirming the Cloud Implementation in their own Data Centre for providing services to the customers.	

SL. No.	Clause	Documents Required	Reference
		b. Client certificate confirming the cloud services they are getting from the Bidders Data Centre	
9.	The Bidder must have the following valid certification as on bid submission date: - ISO 9001:2015 (Quality Management System) - ISO/IEC 27001:2013 (Information Security Management System) - CMMI Development V2.0 (CMMI DeV) ML3	Valid Copy of the Certifications stating the scope ofthe certification	
10	The Bidder must have on its roll at least 100 Technically qualified professionals in system integration, virtualization andprior experience in providing the Cloud Solution as on 31.05.2023	Certificate from Bidder's HR Department for the number of Technically qualified professionals employed by the company with their skill set	
11	Bidder shall submit Power of Attorney, duly authorizing the person signing the documents to sign on behalf of the bidder and thereby binding the bidder	Power of Attorney in favour of Authorized Signatory	
12	The Bidder shall not be under a Declaration of Ineligibility for corrupt or fraudulent practices or blacklisted with any of the Government agencies.	Declaration in this regard by the authorized signatory of the Bidder	
13	The Bidder should submit valid letter from all the OEMs confirming the following: • Authorization for Bidder • Confirm that the products quoted are not "end of life or end of sale products" as on Bid Submission date. If in case the support for the product quoted has been stopped/ withdrawn till the time of delivery of	Relevant documentary evidences like Authorization letters (MAF (Manufacturers association Form) from all Vendors whose products are being quoted by the Bidder need to be attached in the proposal)	

SL. No.	Clause	Documents Required	Reference
	equipment, the same will be changed with the superior product at no extra cost • Undertake that the support including spares, patches, upgrades for the quoted products shall be available for the period of the Project		

NOTE: Please submit all the documentary evidence in support of the above conditions as the eligibility criteria. The bidder has to ensure that all pages of the bid are signed by the competent authority.

Format 4 - Declaration Regarding Clean Track Record

To,

The Chief Executive Officer,
Mizoram State e-Governance Society
Directorate of Information and Communication Technology
Old Secretariat Building I, Treasury Square,
Aizawl, Mizoram.

Sir,

I have carefully gone through the Terms & Conditions contained in the RFP Document [No._____] regarding Appointment of an Agency for Upgradation of Mizoram SDC into Cloud Environment and Operational Maintenance for the period of the project. I hereby declare that my company has not been debarred/black listed by any Government / Semi-Government organizations in India. I further certify that I am competent officer in my company to make this declaration.

Thanking you,

Yours faithfully,

(Signature of the Bidder)

Name

Designation

Seal

Date:

Business Address:

Format 5 – Declaration of Acceptance of Terms & Conditions in the RFP

To,

The Chief Executive Officer,
Mizoram State e-Governance Society
Directorate of Information and Communication Technology
Old Secretariat Building I, Treasury Square,
Aizawl, Mizoram.

Sir,

I have carefully gone through the Terms & Conditions contained in the RFP document [No. ……..] for Appointment of an Agency for Upgradation of Mizoram SDC into Cloud Environment and Operational Maintenance.

I declare that all the provisions of this RFP/Tender Document are acceptableto my company. I further certify that I am an authorized signatory of my company andam, therefore, competent to make this declaration.

Yours faithfully,

(Signature of the Bidder)

Name

Designation

Seal

Date:

Business Address:

Section – XI

Format for Response to the Tender: Technical Bid

Section XI. Format for Response to the Tender: Technical Bid

Format 1 – Technical Bid Letter

To,

The Chief Executive Officer,
Mizoram State e-Governance Society
Directorate of Information and Communication Technology
Old Secretariat Building I, Treasury Square,
Aizawl, Mizoram.

Sir,

Subject: Appointment of an Agency for Upgradation of Mizoram SDC into Cloud Environment and Operational Maintenance.

Reference: Tender No: **<Tender Reference Number>** Dated <dd/mm/yyyy>

We, the undersigned Bidders, having read and examined in detail all the Tender documents do hereby propose to provide the services as specified in the Tender document number **<Tender Reference Number>** Dated <dd/mm/yyyy> along with the following:

1. Earnest Money Deposit (EMD)

   We have paid an EMD of ₹ 15, 00, 000/- (Rupees fifteen Five Lacs only) through the portal (https://mizoramtenders.gov.in). This EMD is liable to be forfeited in accordance with the provisions of - *General Conditions of the Contract.*

2. Deviations

   We declare that all the services shall be performed strictly in accordance with the Tender documents except for the variations, assumptions and deviations, all of which have been detailed out exhaustively in the following statements, irrespective of whatever has been stated to the contrary anywhere else in our Tender:

   - Statement of Deviations from Tender Terms and Conditions is as specified in General Terms and Conditions
   - Further we agree that additional conditions or assumptions, if any, found in the Tender documents other than those stated in deviation schedule shall not be given effect to.

3. Contract Performance Guarantee Bond

   We hereby declare that in case the contract is awarded to us, we shall submit the Contract Performance Guarantee Bond in the form prescribed in the RFP.

4. Bid Validity Period

   We agree to abide by this Bid for a period of 180 days after the date fixed for Bid opening or for any further period for which Bid validity has been extended and it shallremain binding upon us and Bid may be accepted at any time before the expiration of that period.

We hereby declare that our Bid is made in good faith, without collusion or fraud and the information contained in the Bid is true and correct to the best of our knowledge and belief.

We understand that our Bid is binding on us and that you are not bound to accept a Bid you receive.

Thanking you,

Yours faithfully,

(Signature of the Bidder)

Name

Designation

Seal

Date:

Business Address:

Format 2 – Technical Solution

Component – I

1. The Bidder is required to describe the proposed solution in this section. Following should be captured in the explanation:
   - Meeting the requirements of Mizoram State e-Governance Society (MSeGS) in terms of how close the proposal is to the functional requirements for the solution as have been proposed for Mizoram State e-Governance Society (MSeGS).
   - Description of the proposed solution architecture including scalability, security and ease of implementation.
2. The Bidder is required to describe the trainings proposed and the amount of emphasis laid on Training the employees schedule details, locations, sessions and their description.

Component - II

1. The Bidder is required to describe the proposed Technical Solution in this section. Following should be captured in the explanation:
   - Clear articulation and description of the design (details provided in the point 2) and technical solution and various components including make and modelof equipment and sizing of infrastructure (including diagrams and calculations wherever applicable)
   - Extent of compliance to technical requirements specified in the scope of work
   - Technical Design and clear articulation of benefits to the State of various components of the solution vis-à-vis other options available.
   - Strength of the Bidder to provide services including examples or case-studies of similar solutions deployed for other Clients.
2. The Bidder should provide detailed design and sizing calculation for the following listing all assumptions that have been considered:

   a. Components Design

   Approach & Methodology for Installation & Configuration of:

   - Virtualization Infrastructure
   - Cloud Components

   b. Operations & Maintenance

   1 Reactive and Proactive maintenance

   2 The kind of support and maintenance hired from different OEM's andvendors with relevant proofs

   3 Detail of helpdesk and support structure for call maintenance

   c. Approach & Methodology for Commissioning of components for Cloud Enablement of State Data Centre.

   (It should be accompanied by the time line and project plan)

   d. **Adherence to Best practices like ISO, ITIL, BS7799, BS15000, ISO: 20000, ISO 27001etc.**

3. Bidder shall provide a detailed project plan with timelines, resource allocation, milestones etc. in for supply, installation and commissioning components for the State Data Centre.

   IA needs to fill in the below schedules and wherever required, attach the necessary documents inline.

   Note: If the proof of attachments is not accompanied in the response, then thatresponse will not be taken into consideration for technical evaluation

Format 3 – Technical Bid Evaluation Criteria

Table 10: Technical Bid Criteria

Sl. No.	Criteria	Evaluation	Max Mark	Supporting Document	Reference
1.	Average Turnover of the Bidder from Indian Operations for the last three financial year ending 31st March 2023	> Rs 50 Cr = 10 marks > Rs 40 Cr ≤ Rs 50 Cr =8 marks; > Rs 30 Cr ≤ 40 Cr = 4 marks;	10	Certified audited balanced sheets of relevant periods or a certificate from the Chartered Accountant / Cost Accountant indicating the turnover details for the relevant period shall be submitted along with the bid Note: 2022-23 Provisional Balance Sheet also accepted	
2.	All completed/ongoing software development projects in Government Sector including application support, technical support and data digitization (with each having a minimum value of 100 Lakhs) project and should have been in the business for a period exceeding three years as on 31.03.2023	>5 Crores = 5 points; >3 but less than 5 crores=4 points; >2 but less than 3 crores=3 points; >1 but less than 2 crores=2 points; else 0	5	Copies of relevant P.O./ Supply Order/ Work Order/ Agreement + certificate from client to be submitted along with the bid	
3.	At least one System Integration project including hardware solution, Application Software Development, application support, technical support, system support, and Data Digitization. The total value should not be less than 4 crores	>8 Crores = 5 points; >6 crore but less than 8 crores=4 points; >4 crore but less than 6 crores=3 points;	5	Copies of relevant P.O./ Supply Order/ Work Order/ Agreement + certificate	

Sl. No.	Criteria	Evaluation	Max Mark	Supporting Document	Reference
	and should have been in the business for a period exceeding three years as on 31.03.2023	>2 crore but less than 4 crores=2 points; else 0		from client to be submitted along with the bid	
4.	Requirements addressed as mentioned in different parts of the RFP and the quality of the solution	Evaluation Committee will evaluate whether all the points/ requirements mentioned in the RFP are addressed well and award points accordingly, the important parameters being:- – Application deployment and testing Strategy – Database Security Mechanism proposed. – Application Security Proposed. – SLA for application. – Quality Control Procedures suggested by Bidders	10		
5.	Bidder's experience in setting-up IT infrastructure in Data Centres in India, quantified in terms of number of projects will be evaluated. Setting- up IT infrastructure in Data Centres would mean where the Bidder has procured, supplied, installed and commissioned IT Infrastructure (Hardware and Software) in Data centre. Only Project Cost greater than ₹ 5 Cr will be considered	>10 Crores = 10 points; >8 crore but less than 10 crores= 8 points; >5 crore but less than 8 crores=5 points; else 0	10	Copies of relevant P.O./ Supply Order/ Work Order/ Agreement + certificate from client to be submitted along with the bid.	

Sl. No.	Criteria	Evaluation	Max Mark	Supporting Document	Reference
6.	Bidder's experience in commissioning Cloud Solution / HCI Solution / Data Centre Solution in India, quantified in terms of number of projects will be evaluated. Setting- up IT infrastructure would mean where the Bidder has procured, installed and commissioned Cloud / HCI / Data Centre Infrastructure (Hardware and Software). Only Project Cost greater than ₹ 2 Cr and set up as per the contract will be considered	>5 Cr = 5 points; >3 Cr but less than 5 Cr = 3 points; >2 Cr but less than 3 Cr = 2 points; else 0	5	Copies of relevant P.O./ Supply Order/ Work Order/ Agreement + certificate from client to be submitted along with the bid.	
7.	Project Plan, Approach, Methodology and Solutions	a) Understanding of the Project requirements (3 marks); b) Approach & Methodology (3 marks); c) Technical Solution (6 marks); d) Work Plan and manpower deployment plan (4 marks); e) Training Plan (4 marks)	20	Proposal and Presentation	
8.	The Bidder must have on its roll atleast 100 technically qualified professionals in its payroll in the area of software development, application support, application upgradation, networking, systems engineer as on bid submission date.	Marks will be given as below – a) 200 or above professionals (10 Marks) b) 150 professionals (7 Marks) c) 130 professionals (5 Marks) d) 100 professionals (2 Mark)	10	Certificate from Bidder's HR Department for the number of Technically qualified professionals employed by the company with their skill set	
9.	Technical Specifications of Equipment		25	Schedule A	

Sl. No.	Criteria	Evaluation	Max Mark	Supporting Document	Reference
	Total		**100**		

Schedule A – Technical Specifications of Equipment

Total Marks = 25

SL.No.	Item	Evaluation	Max Marks
A	**Compute & Storage Infrastructure**		
1.	Blade Server (Type1)	Specifications and OEM Authorization – 2 mark else zero	2
2.	Blade Server (Type2)	Specifications and OEM Authorization – 2 mark else zero	2
3.	Blade Chassis Solution	Specifications and OEM Authorization – 1 mark else zero	1
4.	Management Server	Specifications and OEM Authorization – 2 mark else zero	1
5.	Backup Server	Specifications and OEM Authorization – 2 mark else zero	1
6.	Enterprise Storage	Specifications and OEM Authorization –2 mark else zero	1
7.	SAN Switch	Specifications and OEM Authorization – 1 mark else zero	1
8.	Backup Hardware - Disk-based D2D	Specifications and OEM Authorization – 1 mark else zero	1
B	**Network & Security Infrastructure**		
1.	L3 Leaf Switch (Type-1)	Specifications and OEM Authorization – 1 mark else zero	1
2.	L3 Spine Switch	Specifications and OEM Authorization – 1 mark else zero	1
3.	Management Switch	Specifications and OEM Authorization – 1 mark else zero	1
4.	Internet Router	Specifications and OEM Authorization – 1 mark else zero	1
5.	Server Load Balancer	Specifications and OEM Authorization – 1 mark else zero	1

SL.No.	Item	Evaluation	Max Marks
6.	External Firewall (NGF)	Specifications and OEM Authorization – 1 mark else zero	1
C	**Software/License**		
1.	Virtualization with Management	Specifications and OEM Authorization – 2 mark else zero	2
2.	Private Cloud Solution	Specifications and OEM Authorization – 2 mark else zero	2
3.	Backup Software	Specifications and OEM Authorization – 2 mark else zero	1
4.	Windows Server 2022 Data center - 16 Core License	Specifications and OEM Authorization – 1 mark else zero	1
5.	Windows Server 2022 Standard - 16 Core License	Specifications and OEM Authorization – 1 mark else zero	1
6.	RHEL Server for Standard, 1-2 Sockets, with 2 VMs	Specifications and OEM Authorization – 1 mark else zero	1
7.	Host IPS	Specifications and OEM Authorization – 1 mark else zero	1
		Total	**25**

**The Financial Bid of only those bidders who has scored at least 70% Marks in the Technical Evaluation as specified above will be opened and considered.*

Format 4 – Specifications of the Components

IT INFRASTRUCTURE (Hardware Equipment & Software-Licensing)

A. Compute & Storage Infrastructure

1. Blade Server - Type 1

OEM -
Make & Model -

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
1	CPU	Dual latest Intel 4th Gen Xeon (16-core /2.5GHz) or higher processor.			
2		It should allow to disable any number of cores of the offered processor on a per-processor basis.			
3		64-bit x86 processor fully binary compatible to 64/32-bit applications. Number of cores on a single die/socket will be treated as a single processor.			
4	Memory	32DIMM slots.			
5		Minimum 512GB DDR5 RAM using 64GB DIMMs or higher. Offered Server shall be scalable up to 8TB RAM.			
6		Advanced ECC to detect and correct single and all multibit error that occurs within a single DRAM chip			
7		Online Spare should be supported.			
8		Fast Fault Tolerance or equivalent.			
9	HDD	2 x 480GB NVMe SSD using HW-RAID1 in minimum PCIe 3.0 form factor for OS boot			
10		Support for up to 4 hot-swap NVMe/SAS/SATA SSD drives			
11	Video	Integrated Graphics controller			

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
12	Network Controller	Dual ported 50Gb Converged network Adaptor. Solution to be provided to enable partitioning up to minimum 16 separated physical functions including 1 x FC, 1 x iSCSI and multiple Ethernet ports.			
13	FC HBA	Should be capable of supporting 32 Gbps Dual port Fiber Channel HBA internal to the Server Blade.			
14	Bus Slots	Minimum of 2 Nos of x16 PCIe 5.0 based mezzanine slots supporting Converged Ethernet, Ethernet, and FC adapters.			
15	Ports	1 * external USB 3.0. Dedicated 1Gb Ethernet for OOB (OS independent) management.			
16	OS Certification	Certification for latest Server version of Windows and Linux.			
17	Virtualization	Should support Industry Standard Virtualization Software			
18	Driver/Software Utilities	All required device drivers for OS installation /System Configuration and Server Management			
19	System Management & Security	Remote management of Server over LAN & WAN with SSL encryption through OOB gigabit management port, Remote KVM, Server Health Logging, Virtual NIC, REST API, IEEE 802.1x & IEEE 802.1AR, Forensics capture of defective FW images to NAND/USB for external analysis, HTML5 Remote Console, TPM module, Encrypted Virtual Media, and virtual folder with required advanced IPMI license, AD or LDAP, Config backup, Syslog (local and remote). UEFI Secure Boot and Secure Start, Security feature to ensure servers do not execute compromised firmware code, digitally signed and verified updates, Security Dashboard for Server to detect possible security vulnerabilities, CNSA compliance			
20		Management software should support integration with popular virtualization platform management software like vCenter, SCVMM, and Red Hat RHEV.			
21		Offered Server platform must be ready for container workload deployment			
22		The Server Management Software should be of the same brand as of the server OEM.			

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
23		Server shall have dedicated management memory of minimum 8Gb DDR4 with ECC protection.			
24	Serviceability	System should support embedded remote support to transmit hardware events support. The server should support monitoring and recording changes in the server hardware and system configuration. It assists in diagnosing problems and delivering rapid resolution when system failures occur. Should provide remote firmware update functionality.			
25		Should help provide proactive notification of actual or impending component failure alerts on critical components like CPU, Memory and HDD			
26		System should support embedded remote support to transmit hardware events directly to OEM or an authorized partner for automated phone home support			
27		Solution should be provided for monitoring & analysis feature to predict, prevent and auto-resolve problems and by providing automating case creation and log file submission for the problems that can't be auto-resolved.			
28		System should help in automatic support case creation with OEM.			
29		System should provide firmware upgrade and patch upgrade recommendations proactively.			
30	IDC ranking	OEM should be ranked within top 3 as per IDC report for any one of the previous four quarter in India for server.			
31	Warranty	Five years on-site comprehensive OEM Warranty Support with 24x7 coverage and access to OEM TAC/support.			

2. Blade Server - Type 2

OEM -

Make & Model -

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
1	CPU	Dual latest Intel 4th Gen Xeon (32-core /2.1GHz) or higher processor.			
2		It should allow to disable any number of cores of the offered processor on a per-processor basis.			
3		64-bit x86 processor fully binary compatible to 64/32-bit applications. Number of cores on a single die/socket will be treated as a single processor.			
4	Memory	32DIMM slots.			
5		Minimum 512GB DDR5 RAM using 64GB DIMMs or higher. Offered Server shall be scalable up to 8TB RAM.			
6		Advanced ECC to detect and correct single and all multibit error that occurs within a single DRAM chip			
7		Online Spare should be supported.			
8		Fast Fault Tolerance or equivalent.			
9	HDD	2 x 480GB NVMe SSD using HW-RAID1 in minimum PCIe 3.0 form factor for OS boot			
10		Support for up to 4 hot-swap NVMe/SAS/SATA SSD drives			
11	Video	Integrated Graphics controller			
12	Network Controller	Dual ported 50Gb Converged network Adaptor. Solution to be provided to enable partitioning up to minimum 16 separated physical functions including 1 x FC, 1 x iSCSI and multiple Ethernet ports.			
13	FC HBA	Should be capable of supporting 32 Gbps Dual port Fiber Channel HBA internal to the Server Blade.			

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
14	Bus Slots	Minimum of 2 Nos of x16 PCIe 5.0 based mezzanine slots supporting Converged Ethernet, Ethernet, and FC adapters.			
15	Ports	1 * external USB 3.0. Dedicated 1Gb Ethernet for OOB (OS independent) management.			
16	OS Certification	Certification for latest Server version of Windows and Linux.			
17	Virtualization	Should support Industry Standard Virtualization Software			
18	Driver/Software Utilities	All required device drivers for OS installation /System Configuration and Server Management			
19	System Management & Security	Remote management of Server over LAN & WAN with SSL encryption through OOB gigabit management port, Remote KVM, Server Health Logging, Virtual NIC, REST API, IEEE 802.1x & IEEE 802.1AR, Forensics capture of defective FW images to NAND/USB for external analysis, HTML5 Remote Console, TPM module, Encrypted Virtual Media, and virtual folder with required advanced IPMI license, AD or LDAP, Config backup, Syslog (local and remote). UEFI Secure Boot and Secure Start, Security feature to ensure servers do not execute compromised firmware code, digitally signed and verified updates, Security Dashboard for Server to detect possible security vulnerabilities, CNSA compliance			
20		Management software should support integration with popular virtualization platform management software like vCenter, SCVMM, and Red Hat RHEV.			
21		Offered Server platform must be ready for container workload deployment			
22		The Server Management Software should be of the same brand as of the server OEM.			
23		Server shall have dedicated management memory of minimum 8Gb DDR4 with ECC protection.			
24	Serviceability	System should support embedded remote support to transmit hardware events support. The server should support monitoring and recording changes in the server			

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
		hardware and system configuration. It assists in diagnosing problems and delivering rapid resolution when system failures occur. Should provide remote firmware update functionality.			
25		Should help provide proactive notification of actual or impending component failure alerts on critical components like CPU, Memory and HDD			
26		System should support embedded remote support to transmit hardware events directly to OEM or an authorized partner for automated phone home support			
27		Solution should be provided for monitoring & analysis feature to predict, prevent and auto-resolve problems and by providing automating case creation and log file submission for the problems that can't be auto-resolved.			
28		System should help in automatic support case creation with OEM.			
29		System should provide firmware upgrade and patch upgrade recommendations proactively.			
30	IDC ranking	OEM should be ranked within top 3 as per IDC report for any one of the previous four quarter in India for server.			
31	Warranty	Five years on-site comprehensive OEM Warranty Support with 24x7 coverage and access to OEM TAC/support.			

3. Blade Chassis Solution

OEM -
Make & Model -

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
1.	Solution Requirement	Proposed solution should support provisioning virtual, physical and container infrastructure from pools of compute, storage, and networking resources			
2.		Solution should have single console provisioning for compute, storage and server-side network configuration with choice of direct attach storage (DAS), iSCSI and FC SAN should be available			
3.		Solution should support API to integrate into popular management tools such as Microsoft Systems Center, VMWare vCenter and into open-source automation for DevOps tools such as Chef, Docker and OpenStack.			
4.		Solution should support software defined templates to quickly make changes to the infrastructure. Template should include server BIOS, firmware, boot order, RAID, storage configs and network configs of the infrastructure required for workload.			
5.		Blade chassis solution should support Internal and external storage provisioning: Local/zoned direct attached storage (DAS), software-defined storage (SDS) and storage area networks (SAN). Should support SAN storage management compatibility for switched fabric, direct attached, or vSAN topologies.			
6.		Blade chassis solution should support Boot-from-SAN for Fibre Channel (FC), Fibre Channel over Ethernet (FCoE), and iSCSI storage			
7.		Blade Chassis solution should offer collaborative user interface which support logical resources to physical resources mapping, Smart Search, Activity Log, HTML5 mobile access, and Customizable Dashboard			
8.		Blade chassis solution should support compute blades based on all the recent Intel Xeon processors such as 2nd, 3rd and 4th Gen Processors from day1.			
9.	Form Factor &	Blade chassis solution to be offered for housing 12 units of Dual-CPU blade servers. Offered blade chassis shall be from the latest generation from the Server OEM.			

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
	Technology				
10.		Offered Blade chassis should provide connectivity of the shared resources (network modules, management networks etc.) to the compute blades and offered blade chassis architecture should have no- single-point-of-failure design.			
11.		Dedicated Redundant hot-plug management network connection modules in the chassis for complete management of all the active modules in the chassis			
12.		Management software for the maximum config with perpetual license. The management software should be from the same OEM.			
13.		Built-in hot-plug redundant management modules providing single management point for server, storage and networking for both single chassis & multi-chassis environment.			
14.		Offered blade chassis shall have minimum six I/O module slots to support 3+3 redundancy.			
15.		Blade chassis should provide display port and USB port to connect Laptop/Monitor locally			
16.		Shall have integrated KVM solution			
17.	System Panel	LEDs or LCDs on the chassis can be used to obtain the status of the chassis connection and health.			
18.	Reporting	Should support reporting capabilities for: (a) asset and inventory information for the devices in the enclosures, (b) thermal and power information, including real-time actual power usage per server and per enclosure. Reports should be exportable to csv or Microsoft Excel format			
19.	I/O Module	Redundant hot-plug I/O modules/switches shall be integrated within the chassis such that uplinks from the chassis can be directly connected to core LAN/SAN switches			
20.		I/O module should support 50Gbps downlink to the Server Blades in redundancy supporting carving of each port into at least eight ports.			
21.		Should support to choose Ethernet and FC uplinks as needed			
22.		Should support MLAG/equivalent for resiliency against interconnect failure			
23.		Server to Server communication should be in 1:1 non-blocking			

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
24.		Each I/O module should have minimum provision for 8 x 32Gbps active external FC links, 8 x 25Gbps active SFP28 links, and 2 x 100Gbps QSFP28 links.			
25.		Required cables/connectors/mounting-kits shall be included. Minimum cable length required: 15 meters for all patch cords.			
26.	Power & Cooling	Blade chassis should be populated fully with power supplies of the highest capacity available with the vendor. Power supplies should support N+N as well as N+1 redundancy configuration, where N is greater than 1. Should offer a single-phase power subsystem enabled with technologies for lower power consumption and offering Platinum energy efficiency.			
27.		Blade chassis should have a cooling subsystem consisting of redundant hot pluggable fans or blowers enabled with technologies for improved power consumption and acoustics.			
28.	Driver/Software Utilities	All required device drivers for OS installation /System Configuration and Server Management			
29.	System Management & Security	Remote management of Server over LAN & WAN with SSL encryption through OOB gigabit management port, Remote KVM, Server Health Logging, Virtual NIC, REST API, IEEE 802.1x & IEEE 802.1AR, Forensics capture of defective FW images to NAND/USB for external analysis, HTML5 Remote Console, TPM module, Encrypted Virtual Media, and virtual folder with required advanced IPMI license, AD or LDAP, Config backup, Syslog (local and remote). UEFI Secure Boot and Secure Start, Security feature to ensure servers do not execute compromised firmware code, digitally signed and verified updates, Security Dashboard for Server to detect possible security vulnerabilities, CNSA compliance			
30.		Blade chassis Management Software should be of the same brand as of the server OEM.			
31.		Management software should support integration with popular virtualization platform management software like vCenter, SCVMM, and Red Hat RHEV.			
32.	Serviceability	System should support embedded remote support to transmit hardware events support. The server should support monitoring and recording changes in the server hardware and system configuration. It assists in diagnosing problems and delivering rapid			

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
		resolution when system failures occur. Should provide remote firmware update functionality.			
33.		System should support embedded remote support to transmit hardware events directly to OEM or an authorized partner for automated phone home support			
34.		System should provide firmware upgrade and patch upgrade recommendations proactively.			
35.		System should help in automatic support case creation with OEM.			
36.		Solution should be provided for monitoring & analysis feature to predict, prevent and auto-resolve problems and by providing automating case creation and log file submission for the problems that can't be auto-resolved.			
37.		System should support RESTful API integration			
38.	IDC ranking	OEM should be ranked within top 3 as per IDC report for any one of the previous four quarter in India for server.			
39.	Warranty	Five years on-site comprehensive OEM Warranty Support with 24x7 coverage and access to OEM TAC/support			

4. Management Server

OEM
Make & Model

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
1.	Processor	Minimum One (01) no's of Intel latest 4th Gen /equivalent AMD server processor of 16-core @ 2.5 GHz/higher.			
2.	Chipset	Latest OEM chipset supporting an optimized for the above processor			
3.	Memory	64GB DDR5 RAM using minimum 16GB or higher DIMMs. Scalable up to 2 TB.			
4.	Disks	2 x 480GB NVMe SSD using HW-RAID1 in minimum PCIe 3.0 form factor for OS boot.			
5.		Support for 8 SSD/NVMe drives.			
6.	Slots	Support for minimum 6 PCIe 5.0 slots.			
7.	Ports	2* USB 3.0; 1* Keyboard Port & 1 * Mouse Port (on board/dongle), One dedicated Ethernet Port for OS independent out-of-band hardware management.			
8.	System Chassis	Rack Mount, 2U (max) chassis with security bezel & lock, Chassis Intrusion Detection, Redundant Hot Swappable Power Supply with platinum efficiency			
9.	Graphics	Integrated Graphics			
10.	Network interface	Dual-ported 10/25 Gbps SFP28 ports with 25G LC transceiver SR type.			
11.	FC HBA	Dual port 32 Gbps FC HBA with 32G LC transceiver SR/SW type.			
12.	System Management	OEM embedded controller with IPMI 2.0 compliance, dedicated management port and Server Management Tool from same OEM, preferably embedded in the system board			
13.	OS certification	Certification for latest Server version of Windows and minimum two Linux flavors			

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
14.	Drive/Software utilities	All required device drivers for OS installation, System Configuration and Server Management			
15.	System Management	Remote KVM, Virtual Media, Console logging, Directory Services compliance, REST API, TPM 2.0			
16.		Remote Management of Server over LAN & WAN with Web GUI			
17.		System should support embedded remote support to transmit hardware events directly to OEM or an authorized partner for automated phone support.			
18.		Should help provide proactive notification of actual or impending component failure alerts on critical components like CPU, Memory and HDD.			
19.	IDC Ranking	OEM should be ranked within top 3 as per IDC report for any one of the previous four quarter in India for server.			
20.	Warranty	Five years on-site comprehensive OEM Warranty Support with 24X7 coverage and access to OEM TAC/support			

5. Backup Server

OEM -
Make & Model -

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
1.	Processor	Minimum One (01) no's of Intel latest 4th Gen /equivalent AMD server processor of 16-core @ 2.5 GHz/higher.			
2.	Chipset	Latest OEM chipset supporting an optimized for the above processor			
3.	Memory	64GB DDR5 RAM using minimum 16GB or higher DIMMs. Scalable up to 2 TB.			
4.	Disks	4 x 960 GB SSD drives in minimum RAID5.			
5.	RAID	Tri-mode SAS/NVMe RAID Controller supporting RAID 0, 1, 5 and 6 with 8GB battery backed up Cache.			
6.	Slots	Support for minimum 6 PCIe 5.0 slots.			
7.	Ports	2* USB 3.0; 1* Keyboard Port & 1 * Mouse Port (on board/dongle), One dedicated Ethernet Port for OS independent out-of-band hardware management.			
8.	System Chassis	Rack Mount, 2U (max) chassis with security bezel & lock, Chassis Intrusion Detection, Redundant Hot Swappable Power Supply with platinum efficiency			
9.	Graphics	Integrated Graphics			
10.	Network interface	Dual-ported 10/25 Gbps SFP28 ports with 25G LC transceiver SR type.			
11.	FC HBA	Dual port 32 Gbps FC HBA with 32G LC transceiver SR/SW type.			
12.	System Management	OEM embedded controller with IPMI 2.0 compliance, dedicated management port and Server Management Tool from same OEM, preferably embedded in the system board			
13.	OS certification	Certification for latest Server version of Windows and minimum two Linux flavors			

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
14.	Drive/Software utilities	All required device drivers for OS installation, System Configuration and Server Management			
15.	System Management	Remote KVM, Virtual Media, Console logging, Directory Services compliance, REST API, TPM 2.0			
16.		Remote Management of Server over LAN & WAN with Web GUI			
17.		System should support embedded remote support to transmit hardware events directly to OEM or an authorized partner for automated phone support.			
18.		Should help provide proactive notification of actual or impending component failure alerts on critical components like CPU, Memory and HDD.			
19.	IDC Ranking	OEM should be ranked within top 3 as per IDC report for any one of the previous four quarter in India for server.			
20.	Warranty	Five years on-site comprehensive OEM Warranty Support with 24X7 coverage and access to OEM TAC/support			

6. Enterprise Storage

OEM
Make & Model

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
1.	Storage	Offered storage shall be an all NVMe controller-based enterprise storage array with 100% data availability guaranteed architecture as published on the vendor website. Storage shall be provided with minimum two controllers.			
2.	OS and & Clustering Support	Offered storage should support industry-leading Operating System platforms & clustering including: Windows Server 2019 / 2022, VMware ESXi 7/8, Linux and HP-UX etc.			
3.	Capacity & Scalability	Offered storage shall be supplied with minimum 100TB usable capacity using NVMe SSD drives configured in RAID6. Vendor shall not use more than 10D+2P while sizing the storage.			
4.		Offered Storage shall be able to protect at-least 2 drives failure simultaneously within a given RAID group.			
5.		Offered storage array shall be scalable to at-least 350TB raw capacity.			
6.	Memory & Architecture	Offered Storage array should have at-least 512GB memory across offered controllers.			
7.	Architecture	Offered storage controller shall be based upon at-least PCI 4.0 technology and offered storage shall be offered with at-least 32 number of CPU cores.			
8.		Offered storage shall be true Active-active so that every logical disk is striped across all offered drives and all drives shall be able to contribute the IOs to both controllers simultaneously.			

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
9.		Offered storage shall have native virtualization support so that Raid can be carved out from a logical space instead of dedicating separate physical disks for each application.			
10.		Offered Storage shall be configured in a No Single Point of configuration including Array Controller card, Cache memory, FAN, Power supply etc.			
11.		Offered storage shall support online non-disruptive firmware upgrade for both Controller and disk drives without any reboot of controller.			
12.	Console Management	a) Common Dashboard for all managing multiple arrays through a single cloud native data console.			
13.		b) Main Dashboard shall provide the information of Total number of Arrays, Volumes, hosts, Capacity and performance information of top Arrays and Volumes.			
14.		c) Common role-based access control for managing multiple arrays through a single data console instead of creating users and assigning roles individually at each array.			
15.		d) Common Audit management for all arrays			
16.		e) Shall have capability for tagging the Storage volume to given host applications so that performance charts can be drawn for application instance for easy management and troubleshooting.			
17.		f) Offered console shall advise about Placement of application on best fit system based on workload after application tagging.			
18.		g) Shall be able to provide the context aware software updates on the storage array.			
19.		h) Shall be able to offer storage management and configuration as a service instead of controlling, patching, and upgrading the management application by onsite team.			
20.	Monitoring & Analytics	Cloud Enabled Monitoring and analytics engine shall have capability to provide following:			
21.		1) Providing Firmware update path, previous version, readiness check before applying the update to production environment and severity level for required firmware update.			

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
22.		2) Dashboard shall clearly highlight whether there is any issue with array and shall provide the detailed information about the issue.			
23.		3) Providing granular near real time performance analysis, at-least at an interval of 5 minutes. It shall allow to create custom reports in csv and PDF format without the need for enabling extra logging, installing any appliances (physical or virtual), or installing any software.			
24.		4) Providing overall headroom utilization of the array while combining and analyzing various parameters like IOPS, MB/sec, Block size etc.			
25.		5) Headroom utilization shall clearly provide the breakup of headroom consumed by the Volumes or tagged application at storage array			
26.		6) Providing the status of at-least top 5 volumes where latency is extremely high. It shall also provide shading functionality so that more severe hotspot can be easily identified.			
27.	Anamoly Detection	Cloud enabled Advance Analytics engine shall have capability to provide following:			
28.		a) Analytics engine shall have in-built anomaly detection for a given storage volume so that it can provide the variance insight of high LUN latency / response time.			
29.		b) Analytics engine shall clearly mark all those anomaly detection points on the given LUN / Volume latency graph and shall be applicable for both read and write operations.			
30.		c) Anomaly detection shall also be applicable for a given storage volume throughput so that drift of workload can be easily identified from the usual read and write pattern.			
31.	Lifecycle Management	1) Management application shall be truly cloud native so that there shall be no need to configure, upgrade, patching of management application during the lifecycle of support contract and shall be offered as a service.			
32.		2) In case, vendor need any additional service like clustering / federation for managing multiple arrays from a single console and doesn't have cloud native data			

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
		console – then all required accessories like dual Ethernet switches, cables, at-least dual management server in HA etc. shall be provided upfront for at-least 16 arrays.			
33.	Site Assessment	Vendor shall do comprehensive Cloud based assessment, at-least for VMware environment on a quarterly basis and shall factor the required services for it. Assessment shall provide the detailed analysis of VMware Hosts – CPU & Memory utilization, Storage analysis and relevant findings of contention, Culprit and Victim VMs in the environment attached to offered storage. Offered assessment shall do complete analysis of licensing as well.			
34.	Interfaces/Ports	a) Offered Storage array shall have minimum of 8 x 32Gbps Fiber Channel ports and in future shall be upgradable to 64Gbps by replacing the SFP.			
35.		b) Offered storage shall support both Fiber Channel (FCP) as well as NVMeOF over Fiber channel.			
36.		c) PCI 4.0 slot of the Fiber channel card shall have at-least 16 lanes so that each offered port can work at line speed even after upgrading to 64Gbps.			
37.		d) Each offered controller shall have minimum of 48 PCI 4.0 lanes for NVMe disk connectivity.			
38.		e) For maximizing the overall performance and NVMe SSD endurance, offered storage array shall support full RAID stripe write to backend disk drives for eliminating the white space issues of NVMe SSD drives. Vendor shall provide the documentary proof for same.			
39.		f) Offered Storage array system shall also support 2 x 10/25Gbps ethernet ports for storage-based replication.			
40.	Global Hot Spare	Offered Storage Array shall support distributed Global hot Spare for offered Disk drives. Global hot spare shall be configured as per industry practice.			
41.	QoS	1) Offered storage array shall support quality of service for critical applications so that appropriate and required response time can be defined for application logical units at storage. It shall be possible to define different service / response time for different application logical units.			

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
42.		2) Quality of service engine shall allow to define minimum and maximum cap for required IOPS / bandwidth for a given logical units of application running at storage array.			
43.		3) It shall be possible to change the quality of service Response time (In both milliseconds as well as Sub-milliseconds), IOPS, bandwidth specification at real time.			
44.	Capacity Efficiency	Offered storage array shall support inline data efficiency engine (Supporting Thin Zero detect and re-claim, De-duplication and Compression) and shall be enabled by default. Vendor shall have flexibility to enable / disable the data efficiency engine at the time of Volume creation. Storage subsystem shall be supplied with Thin Provisioning, Thin Re-claim, Snapshot, remote replication, De-duplication, Compression, Performance Monitoring, and Quality of service on day 1 for the supplied capacity of the array.			
45.	Container Integration	Offered Storage array shall be integrated with Red-hat OpenShift, Kubernetes and other industry K8 based container platform through CSI driver set. Vendor shall support at-least following functionalities through their CSI / CSP integration:			
46.		a) Shall support both Static and Dynamic provisioning			
47.		b) Shall be able to expand, re-size the persistent volumes given to stateful set applications.			
48.		c) Shall be able to create and delete the snapshots.			
49.		d) Shall support CSI Raw block volume as well as CSI Volume cloning.			
50.		e) Support for both Fiber channel as well as ISCSI.			
51.	Snapshot / Point in time copy & No. of	The storage array should have support for controller-based snapshots (At-least 1024 copies for a given volume). Offered Storage array shall support more than 32000 base volumes on the storage array without snapshot and clone.			

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
	Volumes				
52.	Remote Replication	1) The storage array should support hardware-based data replication at the array controller level across all models of the offered family.			
53.		2) Offered Storage array shall support both Synchronous and Asynchronous replication across 2 storage arrays natively without using any third party or software-based solution.			
54.		3) Offered storage array shall have capability to create the application consistency group for replication operations. Shall have flexibility to have more than 256 volumes per consistency group.			
55.		4) Offered storage subsystem shall support incremental replication after resumption from Link Failure situation or during failback operations.			
56.	Clustering	Offered Storage array shall have capability to provide true Active / Active Replication and Stretch clustering at metro distances for Zero RPO and RTO so that a given volume pair between primary and DR location can have concurrent access to both read and write operations simultaneously. Active / Active replication shall be supported for all well-known OS like VMware, RedHat, Windows etc.			
57.	Multitenancy	Offered storage array shall be true multi-tenant and shall support at-least 128 Tenant per storage array. Every tenant shall be treated as a separate logical storage array with its own user control access.			
58.	IDC Ranking	OEM should be ranked within top 3 as per IDC report for any one of the previous four quarter in India for storage or Storage OEM should be from the leader's quadrant as per latest published Gartner's primary storage MQ report.			
59.	Warranty	Five years on-site comprehensive OEM Warranty Support with 24X7 coverage and access to OEM TAC/support			

7. SAN Switch

OEM
Make & Model

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
1.	Rack-mountable SAN Switch shall be configured where each SAN switch shall be configured with minimum of 24 Ports of 32Gb/s scalable to 64 ports.			
2.	Required scalability shall not be achieved by cascading the number of switches and shall be offered within the common chassis only.			
3.	Should deliver 32 Gbit/Sec Non-blocking architecture with 1:1 performance for up to 64 ports in a energy-efficient fashion.			
4.	Should protect existing device investments with autosensing 8, 16, and 32 Gbit/sec capabilities.			
5.	The switch shall support different port types such as E_Port, D_Port, AE_Port, F_Port & EX_Port.			
6.	Should provide enterprise-class availability features such as redundant and hot pluggable components like power supply and FAN.			
7.	The switch shall provide Aggregate bandwidth of 2Tbps end to end.			
8.	Offered switch shall not have latency more than 700 ns for locally switched ports.			
9.	Offered switch shall support at-least 15000 frame buffers with dynamic buffer sharing capability across ports.			
10.	Switch shall have support for web-based management and should also support CLI.			
11.	The switch should have USB port for firmware download, support save, and configuration upload/download.			
12.	Offered SAN switches shall be highly efficient in power consumption. Bidder shall ensure that each offered SAN switch shall consume less than 250 Watt of power.			
13.	Switch shall support POST and online/offline diagnostics, including RAStrace logging, environmental monitoring, non-disruptive daemon restart, FCping and Pathinfo (FC traceroute), port mirroring (SPAN port).			
14.	Offered SAN switch shall support services such as Quality of Service (QoS) to help optimize application performance in consolidated, virtual environments. It should be possible to define high, medium and low priority QOS zones to expidite high-priority traffic.			

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
15.	The switch shall be able to support ISL trunk up to 256 Gbit/sec between a pair of switches for optimal bandwidth utilization and load balancing.			
16.	SAN switch shall support to restrict data flow from less critical hosts at preset bandwidths.			
17.	It should be possible to isolate the high bandwidth data flows traffic to specific ISLs by using simple zoning			
18.	The Switch should be configured with the Zoning and shall support ISL Trunking features when cascading more than 2 numbers of SAN switches into a single fabric.			
19.	Offered SAN switches shall support to measure the top bandwidth-consuming traffic in real time for a specific port or a fabric which should detail the physical or virtual device.			
20.	OEM should be ranked within top 3 as per IDC report for any one of the previous four quarter in India for storage or Storage OEM should be from the leader's quadrant as per latest published Gartner's primary storage MQ report.			
21.	Five years on-site comprehensive OEM Warranty Support with 24X7 coverage and access to OEM TAC/support.			

8. Backup Hardware - Disk Based D2D

OEM
Make & Model

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
1.	Offered Disk to disk backup device shall be a purpose-built backup appliance and shall be certified to work with at-least 3 Backup application vendor ISV like HPE Zerto, Veeam and Commvault etc.			
2.	Offered device shall be configured to provide minimum 100TB usable space scalable to at-least 200TB usable capacity in native mode (Without de-duplication and compression) and additional 400TB of native usable capacity using storage on the cloud like AWS, Azure or on object storage			
3.	Offered device shall have separate dedicated drives for Operating System of appliance and shall not participate in data backup			
4.	Vendor shall not use any additional staging device in-between while moving the data from Disk based backup device to public cloud or object storage.			
5.	Offered device shall be protected with hardware raid 6 from the factory so that no raid configuration is required in field.			
6.	Offered device shall be protected with hardware raid 6 from the factory so that no raid configuration is required in field.			
7.	Offered device shall support emulation of both VTL and NAS target like NFS & CIFS.			

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
8.	Offered device shall have the ability to configure at-least combination of 64 tape Libraries & NAS targets along with 100,000 or more Cartridge slots in the single appliance.			
9.	Offered device shall have capability to do complete copy of data sets from on premise disk backup storage to Cloud storage instead of data tiering.			
10.	Offered device shall have capability to deliver selective restore from disk Library itself.			
11.	Offered Device shall integrate and utilize customer's current tape backup infrastructure in the following aspects:			
12.	a) Compatibility with the existing backup server / media servers at customer.			
13.	b) Compatibility with existing tape library and tape drives			
14.	c) Compatibility with existing backup software			
15.	Offered device shall have integrated de-duplication license, low bandwidth replication license so that only unique non duplicated block transfers to remote / DR location.			
16.	Offered device shall have intelligence to understand both source-based, and target-based de-duplication and shall be integrated with all well-known backup ISVs. At-least 3 ISVs shall be supported.			
17.	Offered device shall support receiving non duplicated data from remote locations or branch office directly from the application servers / Client servers Offered device shall support receiving non duplicated data from remote locations or branch office directly from the application servers / Client servers			
18.	Ability to flexibly emulate tape drive/ tape formats LTO-Gen5, LTO-Gen6, and LTO-Gen7 etc.			

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
19.	Offered device shall have Minimum of 4 x 10/25Gbps SFP IP ports & 4 x 32Gbps ports. License and SFP for all ports shall be offered and configured			
20.	Offered Appliance Fiber channel ports shall support connectivity of servers either directly or via SAN switches while supporting both source- and Target-based de-duplication			
21.	Offered disk-based backup device shall also support encryption functionality			
22.	Offered disk-based backup device shall also support dual authorization for preventing disruptive operations so that hackers shall not be able to execute or complete all critical operations like deletion of backup store, changing system time etc.			
23.	Dual authorization shall be approved by two separate accounts or entities instead of a single responsible account / entity so that all malicious actions such as ransomware attacks can be effectively prevented.			
24.	Dual authorization shall be independent of Backup ISV being used in the environment			
25.	Offered disk-based backup device shall also support Secure erase feature for protecting against unauthorized recovery of deleted data			
26.	Offered disk-based backup appliance shall support VLAN tagging. Offered IP ports of same type shall also support Port bonding in Adaptive Load balancing as well as in Active-backup mode.			
27.	Offered device shall support rated write performance of at-least 25TB per hour			

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
28.	OEM should be ranked within top 3 as per IDC report for any one of the previous four quarter in India for storage or Storage OEM should be from the leader's quadrant as per latest published Gartner's primary storage MQ report.			
29.	Five years on-site comprehensive OEM Warranty Support with 24X7 coverage and access to OEM TAC/support			

B. Network & Security Infrastructure

1. L3 Leaf Switch (Type 1)

OEM -
Make & Model -

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
1.	Each switch shall have minimum of 48-ports of 1/10/25G SFP28 and 8-ports of 40/100G QSFP28 ports. Dedicated OOB Management port (1Gb RJ45)3			
2.	Minimum Switching capacity of 4Tbps and wire-speed forwarding capacity.			
3.	Maximum 1000ns latency. Complete L3 routing software/license from day1.			
4.	QoS classification, QoS Rewrite, Queuing & Scheduling, RED/WRED, ECN, ACL, PFC, 802.3x flow control, 802.1Qbb, 802.1Qaz, DCBx, Application TLV, 802.1ab			
5.	VXLAN ready from day-1, VxLAN EVPN, VxLAN Hardware VTEP, VMware NSX integration, Open stack integration ready			
6.	802.1Q VLAN, Voice VLAN, QinQ, Concurrent 2K VLANs, RSTP, MSTP, RPVST, BPDU Filter & Guard, Loop Guard, Root Guard, VRRP, LAG, MLAG, LACP. Multi-active Gateway (MAGP), Static Route, OSPF, BGP, BFD, ECMP			
7.	RADIUS, TACACS+ & LDAP, Access Control Lists (ACLs L2-L4 & user defined), CoPP, Port Isolation, sFlow (RFC 3176)/Equivalent, CLI, SSH/Telnet			
8.	128K forwarding entries shared across ACL, routes, MAC, and ECMP.			

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
9.	Suitable rack mount kit and power cord to be included. Required Transceivers and/or cables to be included as per proposed solution.			
10.	Five years on-site comprehensive OEM Warranty Support with 24X7 coverage and access to OEM TAC/support.			
11.	OEM should be ranked within top 3 as per IDC report for any one of the previous four quarter in India for Network or Network device OEM should be from the leader's quadrant as per latest published Gartner's Wired-LAN MQ report.			

2. L3 Spine Switch

OEM

Make & Model

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
1.	Each switch shall have minimum of 32-ports of 40/100G QSFP28 ports. Dedicated OOB Management port (1Gb RJ45)			
2.	Minimum Switching capacity of 6Tbps and minimum 4Bpps wire-speed forwarding capacity.			
3.	Maximum 500ns latency. Complete L3 routing software/license from day1.			
4.	QoS classification, QoS Rewrite, Queuing & Scheduling, RED/WRED, ECN, ACL, PFC, 802.3x flow control, 802.1Qbb, 802.1Qaz, DCBx, Application TLV, 802.1ab			
5.	VXLAN ready from day-1, VxLAN EVPN, VxLAN Hardware VTEP, VMware NSX integration, Open stack integration ready			
6.	802.1Q VLAN, Voice VLAN, QinQ, Concurrent 2K VLANs, RSTP, MSTP, RPVST, BPDU Filter & Guard, Loop Guard, Root Guard, VRRP, LAG, MLAG, LACP. Multi-active Gateway (MAGP), Static Route, OSPF, BGP, BFD, ECMP			
7.	RADIUS, TACACS+ & LDAP, Access Control Lists (ACLs L2-L4 & user defined), CoPP, Port Isolation, sFlow (RFC 3176)/Equivalent, CLI, SSH/Telnet			
8.	128K forwarding entries shared across ACL, routes, MAC, and ECMP.			
9.	Suitable rack mount kit and power cord to be included. Required Transceivers and/or cables to be included as per proposed solution.			
10.	Five years on-site comprehensive OEM Warranty Support with 24X7 coverage and access to OEM TAC/support.			
11.	OEM should be ranked within top 3 as per IDC report for any one of the previous four quarter in India for Network or Network device OEM should be from the leader's quadrant as per latest published Gartner's Wired-LAN MQ report.			

3. Management Switch

OEM -
Make & Model -

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
1.	Rack-mountable switch shall have minimum 24 no's RJ-45 autosensing 10/100/1000 ports and 4x1G SFP ports.			
2.	Minimum 8K MAC table, 200 concurrent VLANs, Jumbo frame			
3.	56Gbps switching capacity & 41Mpps packet forwarding throughput			
4.	IPv4 and IPv6 Management			
5.	Layer-2 switching features such as 802.1Q, 802.1p, CoS, RSTP/MSTP, DoS protection, Web Management			
6.	Five years on-site comprehensive OEM Warranty Support with 24X7 coverage and access to OEM TAC/support.			
7.	OEM should be ranked within top 3 as per IDC report for any one of the previous four quarter in India for Network or Network device OEM should be from the leader's quadrant as per latest published Gartner's Wired-LAN MQ report.			

4. Internet Router

OEM -
Make & Model -

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
1.	Router should have advanced multi-services architecture delivering high-performance routing, switching and security features			
2.	Router should be based on Multi-core or equivalent processor			
3.	The router should have eight 10/100/1000 Mbps Copper LAN/WAN ports (RJ-45) and four 1/10G SFP+ slots. The router should be populated with necessary transceivers/cables as per design on Day 1			
4.	The router should have one USB interface and 1 RJ-45 console port			
5.	The router should be configured with 4 GB DDR3 SDRAM			
6.	The router should have internal redundant power supply populated from Day 1			
7.	The router should have up to 8 Mpps (64-byte packets) throughput			
8.	Routing table size of 500000 entries (IPv4/IPv6)			
9.	Features (Any licenses required should be included from Day 1)			
10.	The router should support the following IP Routing Protocols (IPv4) - Static Routing, RIP, OSPF, BGP			
11.	The router should support the following IP Routing Protocols (IPv6) - Static Routing, RIPng, OSPFv3, BGP+			
12.	The router should support Multicast routing protocols for IPv4 and IPv6 - PIM-DM, PIM-SM and Source-Specific Mode (SSM)			
13.	The router should support Multicast Source Discovery Protocol (MSDP) for inter-domain multicast applications			
14.	The router should support Multicast Border Gateway Protocol (MBGP)			
15.	The router should support policy routing for increased performance and security			

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
16.	The router should have QoS features including Traffic policing, shaping, Congestion management, congestion avoidance etc			
17.	The router should have embedded security capabilities like Statefull Firewall, IPSec, ACL Filtering etc			
18.	The router should provide IPv6 transition mechanisms like NAT-PT, Tunneling etc			
19.	Dynamic VPN Capability for ease of VPN deployment			
20.	The router should support Multiprotocol Label Switching (MPLS) Layer 3 VPN, Layer 2 VPN, MPLS QoS, Martini draft and Kompella-draft technologies			
21.	Layer-2 features like Spanning Tree Protocol (STP), VLANs, IGMP, Port mirroring etc			
22.	All the advanced software features should be enabled from Day 1 (Routing, MPLS etc) to avoid any additional licensing complexity or cost in future			
23.	SNMP V1/V2c/V3, RMON/sFlow or equivalent			
24.	RADIUS/TACACS+ for management security			
25.	Integrated console port provided with console cable			
26.	Should analyze network performance and service quality, such as jitter, delays etc. by sending test packets			
27.	Operating temperature 0ºC to 45ºC			
28.	19" Rack mountable (any hardware required should be offered)			
29.	Should have green initiative by providing support for RoHS and WEEE regulations			
30.	Five years on-site comprehensive OEM Warranty Support with 24X7 coverage and access to OEM TAC/support.			

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
31.	OEM should be ranked within top 3 as per IDC report for any one of the previous four quarter in India for Network or Network device OEM should be from the leader's quadrant as per latest published Gartner's Wired-LAN MQ report.			

5. Server Load Balancer

OEM
Make & Model

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
1.	The proposed Network Function Appliance should be multi-tenanted appliance and have capabilities to run multiple 3rd party and open-source independent virtual instance of Network functions with dedicated Hardware resources for future requirements and scalability in the same appliance. Each virtual instance contains a complete and separated environment of resources, configuration, management, OS and have capability to host open-source virtual network Functions and CentOS & Ubuntu to incorporate new technologies in the same appliance.			
2.	The appliance should have minimum 4 x 10G SFP+ interfaces with compatibility to 1G/10G and required transceivers should be provided to support copper connectivity too in case required. Should have built in 64 GB RAM, 4 TB Hard disk and capability to create at least 8 virtual Network functions from Day 1. Device to provide 40 Gbps throughput from Day1. Device should have minimum1*SSL ASICS/FGPA/cards with network virtual function support.			
3.	The solution should support 5M L7 requests per second, 50M L4 concurrent connections & 2M L4 connections per second.			
4.	It should provide Secure online application delivery using hardware- based high performance SSL acceleration with minimum 25 Gbps SSL Bulk Encryption throughput & 25 Gbps SSL Compression throughput. The appliance should have 40K SSL TPS (RSA 2K) and 25K ECC TPS (ECDSA P256).			
5.	It should support L2-L7 Load balancing, Server Persistence, Content Routing & Switching, SSL offload, ePolicy L7 Application Scripting, eRoute L4 Routing			
6.	It should support advance functions Authoritative name sever, DNS proxy/DNS NAT, full DNS server with DNSEC, DNS DDOS, application load balancing from day one. It should be capable of handling complete Full DNS bind records including A,MX, AAAA, CNAME, PTR, SOA etc.			
7.	Appliance should provide full ipv6 support and OEM should be IPv6 gold- certified. OEM should be listed vendor for ipv6 phase-2 certification			

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
8.	Application, Server & Link Health Checks - ARP, ICMP, TCP, HTTP/HTTPS, DNS, Radius, MySQL, MsSQL, RTSP, SIP single port/protocol, Multi-port, physical port, ICMP and user defined L4 – Next gateway health checks			
9.	It should maintain server persistency based on source ip and destination ip, http header, url, cookie and SSL ID. The appliance should support multi-port, scripted and custom health check with content verification			
10.	The appliance should provide application delivery controllers with features like round robin, weighted round robin, least connection, Persistent IP, Hash IP, Hash Cookie, consistent hash IP, shortest response, proximity, SNMP, SIP session ID, hash header etc. and support for policy nesting at layer7 and layer4, Should also have Script based functions support for content inspection, traffic matching and monitoring of HTTP, SOAP, XML, diameter, generic TCP, TCPS. Load balancer should support ePolicies to customize new features in addition to existing feature/functions of load balancer.			
11.	should support one arm, reverse and transparent proxy mode deployment scenarios and should support nested layer7 and layer4 policies.			
12.	Device to have capabilities to run ADC and SSL VPN as independent Network Function and not an integrated solution to ensure required performance. It should also provide machine authentication based on combination of HDD ID, CPU info and OS related parameters to provide secure access to critical resources.			
13.	The solution should support enterprise remote desktop control role-based desktop publishing			
14.	The solution should be able to enforce data leakage protecton policies for secure VDI to allow/deny copy-paste, clipboard, drive, port and print redirection			
15.	The Solution should be able to mitigate a range of attacks, including key-logging, shoulder surfing, brute force, dictionary, interception, cross-site scripting, replay, automated attacks, sniffing and stored browser password.			
16.	It shall support built-in failover decision/health-check conditions. It shall also support failover and High Availability (HA) requirements. It shall have redundant power supplies. Shall support script-based functions support for content inspection, traffic matching and monitoring of HTTP, SOAP, XML, diameter, generic TCP, TCPS			

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
17.	Should provide mechanism to bind multiple health checks, support for Application specific VIP health check and next gateway health checks. Should support persistency features including RTS (return to sender) and ip flow persistence.			
18.	Should provide comprehensive and reliable support for high availability with Active- active & active standby unit redundancy mode. Should support both device level and VA level High availability for using standard VRRP protocol (No Proprietary protocol).			
19.	OEM should have presence in India from last Ten (10) years. OEM Technical Assistance Centre must be available in India in the last 10 years with tollfree number			
20.	OEM should be listed among top 3 in IDC for ADC vendor in India (Year 2021-2022).			
21.	Should have 24X7 onsite warranty support for 5 years from the OEM			

6. External Firewall

OEM
Make & Model

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
1.	Should be a Rack Mountable Hardware Appliance with Next Generation Firewall Functionalities			
2.	Should support Static Routes & Policy Based Routing and dynamic routing protocol like RIP, OSPF, BGP. The Firewall should also acts as router and Internet Service Provider should be able to terminate the Internet Link directly to the device.			
3.	The following features should be included in the appliance from Day 1: NATing with IPV4 & IPV6, IPSec VPN,SSL VPN, Application Visibility and Control (AVC), User Identity, Network Gateway DLP, Next Generation Intrusion Prevention System (IPS), Zero Day Protection , Gateway antivirus,Anti Bot,Advance Malware protection,Sanbox cloud service, Web security essentials ,Enterprise-class URL & content Filtering with database which should have at least 250+ million rated websites.			
4.	It should handle TCP, UDP, HTTP traffic and Should support 64 Byte or above Packet Size			
5.	Should have NGFW Throughput of 11 Gbps or above, Threat prevention throughput of 10 Gbps or above and IPSec VPN Throughput of 14 Gbps or Above			
6.	Should support 3 Million or above concurrent Sessions and support 250K or above New sessions per second			
7.	a) Should have 6 Nos. of 1GE RJ45 Ports, 8 x 1GE SFP/10 GE SFP+, atleast 2 ports shall be configurable as 25 GE ports, with all the ports shall be configurable either as LAN or WAN ports. Minimum 2 SFP ports and 2 SFP+ Ports to be populated with SR Tranciever. b) Should have 1 no. of USB port and 1 No. of Console Port c) should have the storage capacity of 480 GB SSD			
8.	Should support 5000 IPSEC VPN Site to Site tunnels and support 2500 of SSL VPN users			

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
9.	It should support Hot Swappable Power Supply and should support High Availability Active-Active Configuration			
10.	Should Support 10000 or above NGIPS Signature from day one.			
11.	Should have NDDPP & Common Criteria Certifications and Should Support Ipv6 from Day 1			
12.	The Firewall should support virtualization and support at least 10 virtual domains from day one			
13.	NGFW must support Secure SD - WAN feature along with advance routing protocols such as BGP & OSPF			
14.	Built-in SDWAN must be able to do load balancing of various links based on source address, User group , protocol and/or applications			
15.	SLA for SDWAN must be defined based on packet loss or latency or jitter. Even combination of all 3 option must be possible			
16.	Should have 24X7 warranty support and all security subscriptions for 5 years from the OEM			

C. Software/License

1. Virtualization with Management Software

OEM -
Make & Model -

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
1.	Offered virtualization software and related management license shall be of perpetual in nature and for on-premise deployment.			
2.	Offered virtualization software should be based on hypervisor technology that sits directly atop of hardware (bare metal). The vendor should offer suitable management software in this regard as well.			
3.	Offered virtualization software should be able to run various guest operating systems like Windows, Linux (at least RedHat, SUSE, Ubuntu, Debian, FreeBSD, Oracle Enterprise Linux & CentOS), including any other OS available under open source.			
4.	Offered solution should have the capability for creating virtual machine (VM) templates to provision new servers.			
5.	Offered solution shall allow the VM to be able to boot from iSCSI, FCoE, & FC SAN.			
6.	Offered solution should be able to consume Storage across various protocols like DAS, NAS, & SAN. It should support thin provisioning.			
7.	Offered solution should allow for taking snapshots of VMs to be able to revert to an older state, if required.			
8.	Offered solution should support live migration of VMs from one host to another.			
9.	Offered solution should have the ability to live migrate VM files from one storage array to another without no VM downtime.			
10.	Offered solution should provide an integrated back-up solution in addition to support for a centralized backup proxy to offload backup from virtualization host.			

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
11.	Offered management software should have integrated physical host and VM performance monitoring including CPU, Memory, Disk, Network, Power, Storage Adapter, Storage Path, Cluster services, Virtual machine datastores			
12.	Offered management software should be able to integrate into industry standard EMS systems.			
13.	Software shall be quote for all physical servers/Sockets/Cores in the Tender and offered with 5-years 24x7 support.			

2. Private Cloud Solution

OEM -
Make & Model -

Sl.	Functional Requirements	Description	Specifications offered	Compliance (Yes / No)	Deviations, if any
A	**Administration**				
1	Multi-Tenancy	Tenant in CMP should be an isolated environment with unique users and workloads. The Master Tenant should be default Tenant in CMP. All other Tenants outside of the Master Tenants are Subtenants. CMP should be able to share or assign their cloud resources, such as specific hosts, networks, resources pools and datastores, across sub-Tenants, rather than an entire cloud			
2	Roles Authorization	CMP should support two different roles for Users and Tenant access management.			
3	Impersonate Tenant User	CMP should allow admin users in the Master Tenant to impersonate any user in the Subtenants to see the application.			
4	Resource Visibility	Resources can be configured with private or public visibility.			
5	Directory Integration	CMP should be able to integrate with many of the most common identity source technologies, such as Active Directory, Okta, LDAP etc			
6	SAML or SSO integration	SAML identity source integration to authenticated by external SAML providers or use Azure SSO.			

7	Service Plans	CMP should show various t-shirt sizes for various clouds.			
8	Pricing Plans	CMP should allow create prices based on CPU, Memory, Disks etc			
9	Users	CMP should sync users from respective identity source or allow create local users			
10	Other Integrations	CMP should allow various integrations with Configuration management, Automation, DNS, Code Repos, Services managers etc			
11	Governance	Policies should provide governance, ease of use, cost-savings, and auditing features to CMP. CMP enables end users to create Policies scoped to Users, Roles, Groups, Clouds, Tenants, Networks, Plans, and Global scoping to give Admins full control and governance over their environments.			
12	Health Dashboard	CMP dashboard should be able to provide the overview of the health of CMP appliance and should aggregates appliance-specific logs into one list			
13	CMP settings	CMP should allow to sets global configuration parameters, whitelabeling, provisioning, monitoring, backups, logs, software licenses, and the license for itself.			
14	User Settings	CMP user should be able to configure their photo, username, password, email, theme, 2FA, Linux and Windows VM login credentials from the console			
B	**Infrastructure Management**				
1	Resource Group	CMP should allow create a group which defines resources a user has access to.			

2	Multi-Cloud management	CMP should allow integrations or connections to all major public cloud i.e. AWS, Azure GCP etc , private i.e. VMware, OpenStack Nutanix, Hyper-V etc, or bare metal servers			
3	K8s Cluster management & integration	CMP should allow to create and manage lifecycle of K8s cluster and CMP should allow integration with all major K8s distribution including public like EKS, AKS & GKE and private external k8s clusters.			
4	Compute	CMP should have universal stage for viewing and managing Hosts, Virtual Machines, Containers, Resources, and Bare Metal across Clouds			
5	Network management	CMP should allow configure networks across all clouds in CMP. Existing networks from Clouds added in CMP will auto-populate in the Networks section			
6	IPAM	CMP should allow create IP Pools, which is an IP address range CMP can use to assign available static IP addresses to Instances.			
7	Floating IP	CMP should support floating IP addresses			
8	Domains	CMP should allow setting FQDNs, joining Domains, and creating DNS records			
9	Proxies	CMP should provide out of the box support for proxy connectivity. Proxy authentication support should also be provided with both Basic Authentication capabilities as well as NTLM for Windows Proxy environments			
10	Security Groups	CMP should support Security Group which acts as a virtual firewall that controls the traffic for one or more Instances			

11	Network Integrations	CMP should allow integration with various SDN solutions, IPAM tools, and DNS tools.			
12	Load Balancer	CMP should support integration with various LB like HaProxy Load Balancers, Amazon Elastic and Application Load Balancers, Azure Load Balancers, and integrates with several external Load Balancers.			
13	Storage Buckets	CMP should support Storage Buckets which can be used for Backup, Archives, Deployment and Virtual Images storage targets. Buckets can be browsed, and files and folders can be uploaded, downloaded or deleted from the Bucket section, including AWS S3, Google Cloud Storage, Azure etc			
14	File Share	CMP should allow creation of file share based NFS and CIFS protocols			
15	Library	CMP should allow to store credentials, SSH keypairs, and SSL certificates.			
16	Baremetal Provisioning	CMP should provide simple-to-use Bare Metal boot capability based on PXE.			
C	**Resource Provisioning**				
1	Instances	CMP should allow provisioning of a set of containers or virtual machines that can correlate to a single horizontally scalable entity or a service suite, like a database. Instance can contain one or more containers/VMs depending on the Instance type and configuration.			
2	Apps	CMP should have Apps which allows instances having general relationships to be grouped in a clean and organized manner. Apps should also allow provisioning multi-tier application			

3	Catalog	CMP should present a simplified self-service view where users can select and deploy Instances, Blueprints or Workflows with pre-defined configuration in just a few clicks and without presenting an overwhelming list of options			
4	Jobs	CMP should allow scheduled execution of Automation Tasks and Workflows.			
5	Executions	CMP should contain the execution status and history from Task and Operational Workflow Executions run based on time and day.			
6	Code Repositories	Repositories integrated with CMP allowing users to browse repository folders and files, view file contents from any branch, trigger a refresh, and create tasks, scripts, and templates directly from the repos			
7	Code Deployments	CMP should provide PaaS like capabilities when it comes to deploying applications into the newly provisioned environment			
8	Code Integrations	CMP should allow Git and Github Repository Integrations, and Jenkins Build Service Integrations, which can be created and managed			
D	**Library and Automation**				
1	Automation Tasks	CMP should allow create tasks where scripts added directly, scripts and templates from the Library section, recipes, playbooks, salt states, puppet agent installs, and http (api) calls.			
2	Automation Workflows	CMP should allow group of task as workflows. CMP should have provisioning and operational workflows.			

3	Scale Thresholds	CMP should have Scale Thresholds as pre-configured settings for auto-scaling Instances			
4	Power scheduling	CMP should be able Set weekly schedules for shutdown and startup times for Instances and VM's, apply Power Schedules to Instances pre or post-provisioning, apply Power Schedule policies on Group or Clouds, or use Guidance to automatically recommend and apply optimized Power Schedules			
5	Execute scheduling	CMP should creates time schedules for Jobs, including Task, Workflow and Backup Jobs.			
6	App Blueprints	CMP should support a vast array of providers and configurations with programmatic markup or Infrastructure as Code capabilities i.e. Terraform, ARM (Azure), CloudFormation (AWS), Kubernetes, Helm			
7	Catalog Items	CMP should allow administrators to create easily-deployable items for consumption by users operating under the "Service Catalog" Persona			
8	Virtual Images	CMP should displays a list of all images, local and synced, that are available to deploy			
9	Options	CMP should have user-defined custom inputs that are used throughout tasks, workflows and service catalogs.			
10	Spec templates	CMP should allow users to leverage several major Infrastructure-as-Code solutions thru Spec templates			
11	File templates	CMP should allow File Templates for generating config files, such as my.cnf, elasticsearch.yml or any text file.			
12	Security Packages	CMP should allow uploading SCAP packages which can then be consumed in Security Scan Jobs			
E	**Monitoring and Logging**				

1	Application Monitoring	CMP should have monitoring features from day1 for anything provisioned within CMP automatically gets a check created in the monitoring service			
2	Logs	CMP should use the latest and greatest technologies and standards to be able to service large amounts of log traffic as well as facilitate easy viewing			
3	Check	The Monitoring system in CMP should be composed of individual checks. A check is created for every container or VM that is provisioned through CMP and should be type aware.			
4	Incidents	CMP should provide incident management for IT Operations environment. The ability to notify the appropriate people of an outage that requires immediate attention to reduce recovery time and even preventing potential customer facing impacts. CMP should also provide external integrations with incident management tools.			
5	Notifications	CMP should allow notifications through email, sms, web hook, slack hook etc			
6	Alert Rules	CMP should provide powerful means to configure who gets notified in various scenarios. These scenarios include targeting specific checks, groups, or apps, and adding the appropriate recipients to be notified during a situation in which those filters are impacted			
F	**Backups**				
1	Backup Integration	CMP should be able to integrate with backup tools like Veeam, Zerto, Commvault, Rubrik, Avamar etc			

2	Backups	CMP should allow currently configured Backups can be viewed and managed, and new Instance, Host and Provider backups be configured			
G	**Tools**				
1	Key-value Store	CMP should provide capability to securely store or generate credentials to connect to your instances			
2	Archives	CMP should provide a way to store your files and make them available for download by your scripts and Users.			
3	Image Builder	CMP should allow create vmdk, qcow2, vhd and raw Images from scratch.			
H	**Operations**				
1	Dashboard	CMP should provide single, high-level view into environment which includes easy-to-read performance and configuration information			
2	Reports	CMP should offer different report types which are designed to slice up costing and usage across Clouds, Tenants, and more. Reports can be run on-demand as needed or can be scheduled to run on certain intervals to be viewed at a later time			
3	Analytics	CMP should allow administrators to break down costs and usage, then filter the results by relevant delineations including Groups, Clouds, Tenants or even tag values. Analytics dashboards can be organized into three primary categories based on their measurement intentions: costing, utilization, and workloads			
4	Workload Optimization	CMP should show recommendations for resource and cost optimization by analyzing the CPU, RAM, and Storage activity.			

5	Wiki/KBase	CMP should allow create Wiki, which is a tenant-wide, RBAC-controlled, auditable Wiki that allows easy UI, API and CLI access to information, notes, configurations or any other data needed to be referenced or shared with others.			
6	Budgets	CMP should provide insight into spending across their designated scope, allowing users to create and plan a budget targeted to their account, clouds, tenants, users, or groups			
7	Invoices	CMP should offers highly-granular costing data through invoices			
8	Usage	CMP should show billing information for Instances and hosts that have pricing configured on their Service Plan			
9	Approvals	CMP should also Policies creation for Groups and Clouds to require approvals for actions with the built-in CMP approvals engine, or via a ServiceNow integration			
10	Activities	CMP should displays a recent activity report for Auditing			
I	**Persona based Access**				
1	Standard	CMP should have Standard Persona which should be typical default view			
2	Service Catalogs	CMP should have Service Catalog Persona, which is a simplified view where users are presented with pre-configured Instance types, Blueprints, and Workflows to choose from based on their Role			
J	**Deployment**				
1	HA	CMP should have no single point of failure type installation capability for production environment			

2	Minimum Install	CMP should also support minimum footprint deployment for dev/test setup			
3	Host OS support	CMP should also major Enterprise grade operating system for deployment			
4	Secure Installation	CMP should allow secure install over FIPS or CIS compliant images			
6	Air-gapped installation	CMP should allow to installed in environment which doesn't have any internet access			
7	HTTPS	CMP should allow https communication thru web UI			
8	FQDN	CMP should allow configuration of FQDN mapped to IP address of VIP			
9	Whitelabel	CMP should allow custom Logos, Colors, Copy, and custom CSS both for master and sub-tenants			

3. Backup Software

OEM -
Make & Model -

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
1.	Proposed software should provide backup and archival on Windows, Linux (Ubuntu, Cent-OS, RHEL, etc.) platform through single management console.			
2.	Proposed software should include all necessary software and database to perform backup and archival activities.			
3.	The offered software should include application aware backup agents to perform full and logs backup of both standard and enterprise edition of MySQL (Ent. & Std. Edition), Oracle, PostGreSQL and Exchange within backup GUI.			

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
4.	The offered software should provide application aware backups through integration with array base snapshot without scripting for standard and enterprise edition of MySQL (Ent. & Std. Edition), PostgreSQL, MongoDB and Oracle DBs			
5.	The offered software should provide table level recovery from backup GUI for Oracle and MySQL (Ent. & Std. Edition) database.			
6.	Proposed backup software should have single management console for backup of physical standalone servers, VMs, databases, desktop/ laptop and email clients.			
7.	The offered software must integrate with different hypervisors managers to perform agentless backup from Hyper-V, VMware, RHEV, Oracle Virtual machine, Citrix Xen, Huawei FusionCompute, Oracle Cloud Infrastructure.			
8.	The offered software must integrate with different hypervisors management tools to provide inline cross restore from VMware to AWS, VMware to Azure, VMware to Azure Stack, VMware to VMware to Google Cloud, VMware to Nutanix AHV, VMware to OpenStack, Oracle VM to Azure, Nutanix to Azure.			
9.	The proposed backup software should work with storage of various OEMs like EMC, Dell, HPE, Hitachi, NetApp, Cisco, Fujitsu etc. hardware and provide functionality like deduplication, compression, encryption, BMR, replication, DB backup etc. independent of the hardware vendor.			
10.	Proposed software should support CEPH, OpenStack platform, Kubernetes, container storage interface (CSI) integration, etcd backups.			
11.	Proposed backup solution should be able to protect the backed up disk volume from Ransomware.			
12.	The software must keep single copy across backup and file archival with the help of global data de-duplication across different electronic data repository for storage optimization.			
13.	The software must provide single graphical web view for complete backup and historical data archival.			
14.	The offered software must include more than three 256 bit Encryption algorithms (like AES, 256 BIT) without additional license, any such license if needed should be quoted to cover complete infrastructure.			

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
15.	Proposed software should include file archival feature to move historical data based on file attributes for long term retention. Archival and Backup should be managed from single console with single data			
16.	The offered software must support flat file data archival with seamless access for Windows, Linux and Unix. The offered backup software should be able to restore backed up data. a) To original host b) To different host c) From failed job till the last point of data written on disk volume			
17.	The software should be offered for 100 VM licenses to backup both DC and DR location. License should include all mentioned feature along with dedupe, compression, DB logs backup and file archival feature for Linux and Unix with seamless access.			
18.	Proposed software should have feature to replicate backup copy to one or multiple sites in proposed license.			
19.	Proposed software license should integrate with the offered backup hardware and also work with any other OEM storage with all the software functionality mentioned above.			
20.	Proposed backup software should be in Gartner's Magic Leaders Quadrant continuously from last 5 years.			
21.	Should have 24X7 warranty support for 5 years from the OEM			

4. Operating System Software

OEM -

Make & Model -

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
1.	Windows Server 2022 Datacenter - 16 Core License			

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
2.	Windows Server 2022 Standard - 16 Core License			
3.	RHEL Server for VDC with 5 Years support			
4.	RHEL Server for Standard, 1-2 Sockets, with 2 VMs with 5 Years support			

5. **Host IPS**

OEM -
Make & Model –

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
1.	Deployment	The solution must provide single platform for complete server protection over physical, virtual (server) & cloud and should protects mainly Linux platforms.			
2.	Feature	The proposed solution provides self-defending servers; with multiple integrated modules below providing a line of defence at the server in a single agent: Anti-virus/Anti-malware, HIPS, Application control, Log Inspection, File Server protection, vulnerable software patching, anti-ransomware.			
3.	Anti Malware Feature	The Proposed Solution should Support Realtime monitoring and should be able to detect and clean malware even if it is stagnant and not executing			
4.	Anti Malware Feature	The proposed solution must be able to perform machine learning to discover new threats before file is executed and able to monitor behaviour of running process to detect malicious behaviour			
5.	Anti Malware Feature	The proposed Solution should support Scan Cache for better performance			
6.	HIPS Feature	Must be able to provide scan assessment engine to discover OS & application vulnerabilities on a server and determine which vulnerabilities have not been mitigated & recommend rules to shield applications & systems with advanced deep packet inspection technology			
7.	HIPS Feature	Must be able to operate in detection or prevention mode to protect operating systems and enterprise application vulnerabilities.			
8.	HIPS Feature	Solution should provide layered defence against advanced attacks and shields against known and unknown vulnerabilities in web and enterprise applications and operating systems.			

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
9.	Application Control	Must be able to provide Application Control in whitelist or blacklist mode			
10.	Application Control	The solution should support Maintenance Mode in which during predefined Downtimes, upgrade etc can take place and all processes automatically learnt and Whitelisted			
11.	Integrity Monitoring	Must be able to monitor critical operating system and application such as directories, registry keys, and values to detect and report malicious and unexpected changes in real-time			
12.	SIEM Integration	The proposed solution should have intelligence to analyse and share key informational log events for correlation to SIEM			
13.	SIEM Integration	The solution must support integration with leading SIEM systems using syslogs, CEF and LEEF Format			
14.	Warranty	Should have 24X7 standard warranty support for 5 years from the OEM			

D. Rack Infrastructure

1. 36U Rack (800 X 1200 mm)

OEM -
Make & Model –

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
1.	36U Fully Loaded Rack along with Complete Accessories			
2.	36U 600mm(W) x 1000mm Depth Rack with			
3.	Front Glass Door 36U 600W			
4.	Rear Door - 36U 600W			
5.	Cam Lock - Square Slot			
6.	Fan : Four Fan			
7.	Monitor Tray			
8.	Ventilation : 495W-725 MM, Metal			
9.	Cable Manager - 01U			
10.	Plastic Cable Loop's			
11.	Power Distribution Unit : Minimum option: 6 x C19, 12 x C13 - 4 Nos			
12.	Earthing Strip - 150 mm Nickel Plating			
13.	Warranty: 5 years			

2. IP KVM Switch with Console

OEM -
Make & Model –

S. No.	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
1.	IP based KVM			
2.	Rack Mountable			
3.	Min. 16 ports to handle 16 systems or higher			
4.	Support for IPv4 and IPv6			
5.	Support for Virtual media and Serial device			
6.	Server connectivity should be through Cat 5e or higher from KVM to servers interface modules and support upto 50m length or better			
7.	Multiplatform client support (Windows and Mac and Linux and Solaris)			
8.	Authentication and Authorization For The KVM Switch Through LDAP, LDAPS, MS Active Directory, RADIUS Or KVM Access Management Server Authentication			
9.	5 years comprehensive warranty and onsite support for hardware, software updates and patches shall be offered directly from the OEM			

Note: The detailed specifications provided should also be accompanied by their data sheets for that particular make and model.

Format 5 – Project Experience

S. No.	Item	Details
General Information		
1.	Customer Name/Government Department	
2.	Name of the Contact Person and Contact details for the project	
Brief Description of scope of Project		
Size of the project		
3.	Contract Value of the project (in crores)	
4.	Capital Expenditure involved (by the govt./ client)	
5.	Total cost of the services provided (by the Bidder)	
Project Details		
6.	Name of the project	
7.	Start Date/End Date	
8.	Current Status (work in progress, completed)	
9.	Contract Tenure	
10.	Type of Project	
11.	Solution architecture employed & core Components	
12.	Scope of Service Delivery System	
13.	Tools Deployment	

Note: The above detail must be accompanied by the copy purchase order / service order

Section – XII

Format for Response to the Tender: Commercial Bid

Section XII.Format for Response to the tender: Commercial Bid

Format 1: Commercial Bid Letter

To,

The Chief Executive Officer,
Mizoram State e-Governance Society
Directorate of Information and Communication Technology
Old Secretariat Building I, Treasury Square,
Aizawl, Mizoram.

Subject: Appointment of an Agency for Upgradation of Mizoram SDC into Cloud Environment and Operational Maintenance.

Reference: Tender No: **<Tender Reference Number>** Dated <dd/mm/yyyy>

We, the undersigned Bidder, having read and examined in detail all the Tender documents in respect of **Appointment of an Agency for Upgradation of Mizoram SDC into Cloud Environment and Operational Maintenance** do hereby propose to provide services as specified in the Tender documents number **<Tender Reference Number>** Dated <dd/mm/yyyy>

1. Price And Validity

All the prices mentioned in our Tender are in accordance with the terms as specified in the Tender documents. All the prices and other terms and conditions of this Tender are valid for a period of 180 calendar days from the date of opening of the Tenders.

We hereby confirm that our Tender prices include all taxes. However, all the taxes are quoted separately under relevant sections.

We have studied the clause relating to Indian Income Tax and hereby declare that if any income tax, surcharge on Income Tax, Professional and any other corporate Tax in altercated under the law, we shall pay the same.

2. Unit Rates

We have indicated in the relevant schedules enclosed the unit rates for the purpose of on account of payment as well as for price adjustment in case of any increase to / decrease from the scope of work under the contract.

3. Deviations

We declare that all the services shall be performed strictly in accordance with the Tender documents except for the variations and deviations, all of which have been detailed out exhaustively in the following statement, irrespective of whatever has been stated to the contrary anywhere else in our Bid.

Further we agree that additional conditions, if any, found in the Tender documents, other than those stated in deviation schedule, shall not be given effect to.

4. Tender Pricing

We further confirm that the prices stated in our Bid are in accordance with your Instruction to Bidders included in Tender documents.

5. Qualifying Data

We confirm having submitted the information as required by you in your Instruction toBidders. In case you require any other further information/documentary proof in this regard before evaluation of our Tender, we agree to furnish the same in time to your satisfaction.

6. Bid Price

We declare that our Bid Price is for the entire scope of the work as specified in the Schedule of Requirements and Tender documents. These prices are indicated Section XII Format for Response to the tender: Commercial Bid attached with our Tender as part of the Tender.

7. Contract Performance Guarantee Bond

We hereby declare that in case the contract is awarded to us, we shall submit the Contract Performance Guarantee Bond in the form prescribed in Section XIII, Annexure I- Proforma of Bank Guarantee towards Performance Security .

We hereby declare that our Tender is made in good faith, without collusion or fraud and the information contained in the Tender is true and correct to the best of our knowledge and belief.

We understand that our Tender is binding on us and that you are not bound to accept a Tender you receive.

We confirm that no Technical deviations are attached here with this commercial offer.

Thanking you,

Yours faithfully,

(Signature of the Bidder)

Name

Designation

Seal

Date:

Business Address:

Format 2 - Summary of Cost Components

Component – I

Summary Component vise Cost Table

S. No.	Item	Reference	Total Price	Total Price in words

All unit rates indicated in the schedules shall be inclusive not limited to supply, installation, duties, transport, packing and transit insurance charges etc. Taxes should be indicated under the relevant column in the schedules.

Component - II

All unit rates indicated in the schedules shall be inclusive not limited to supply, installation, duties, transport, packing and transit insurance charges etc. Taxes should be indicated under the relevant column in the schedules.

Summary Component vise Cost Table

S. No.	Item	Reference	Total Price	Total Price in words

Format 3 – Breakdown of Cost Components

1. Bidder should provide all prices as per the prescribed format. Bidder should not leave any field blank. In case the field is not applicable, Bidder must indicate "0" (Zero) in all such fields.
2. All the prices (even for taxes) are to be entered in Indian Rupees ONLY (% value are not allowed)
3. It is mandatory to provide breakup of all Taxes, Duties and Levies wherever applicable and/or payable.
4. MSeGS reserves the right to ask the Bidder to submit proof of payment against any of the taxes, duties, levies indicated.
5. MSeGS shall take into account all Taxes, Duties & Levies for the purpose of Evaluation
6. The Bidder needs to account for all Out of Pocket expenses due to Boarding, Lodging and other related items.

Component – I

A1 – Application Development, Customization and Integration

Sl.No	Description	Rate	Tax	Amount	Remarks

A2 – COTS Software (if any)

Sl.No	Description	Rate	Tax	Amount	Remarks

A3 – SMS and Payment Gateway

Sl.No	Description	Rate	Tax	Amount	Remarks

A4 – Capacity Building and Training

Sl.No	Description	Rate	Tax	Amount	Remarks

A5 – Additional Item (if Any)

Sl.No	Description	Rate	Tax	Amount	Remarks

Component - II

The Unit Rate as mentioned in the following formats shall be used for the purpose of 'Change Order' for respective items, if any. However, based on the market trends, MSeGS retains the right to negotiate this rate for future requirements.

Cloud Enablement Infrastructure

B1 - IT INFRASTRUCTURE (Hardware Equipment & Software-Licensing)

Sl. No.	Item	UoM	Quantity	OEM	Make & Model	Unit Price	Total Price
A	**Compute & Storage Infrastructure**						
1.	Blade Server (Type1)	Nos	2				
2.	Blade Server (Type2)	Nos	10				
3.	Blade Chassis Solution	Lot	1				

Sl. No.	Item	UoM	Quantity	OEM	Make & Model	Unit Price	Total Price
4.	Management Server	Nos	1				
5.	Backup Server	Nos	1				
6.	Enterprise Storage	Nos	1				
7.	SAN Switch	Nos	2				
8.	Backup Hardware - Disk-based D2D	Nos	1				
B	**Network & Security Infrastructure**						
1.	L3 Leaf Switch (Type-1)	Nos	2				
2.	L3 Spine Switch	Nos	2				
3.	Management Switch	Nos	2				
4.	Internet Router	Nos	2				
5.	Server Load Balancer	Nos	2				
6.	External Firewall (NGF)	Nos	2				
C	**Software/License**						
1.	Virtualization with Management	CPU	26				
2.	Private Cloud Solution	LS	1				
3.	Backup Software	VM	50				
4.	Windows Server 2022 Datacenter - 16 Core License	Nos	4				

Sl. No.	Item	UoM	Quantity	OEM	Make & Model	Unit Price	Total Price
5.	Windows Server 2022 Standard - 16 Core License	Nos	4				
6.	RHEL Server for VDC	CPU	8				
7.	RHEL Server for Standard, 1-2 Sockets, with 2 VMs	CPU	4				
8.	Host IPS	VM	50				
D	**Rack Infrastructure**						
1.	36U Rack (800 x 1200 mm) with 2 Nos of PDU	Nos	2				
2.	IP KVM Switch with Console	Nos	1				
E	**Installation**						
1.	One Time Installation, Configuration, Migration and Training	Lot	1				
					Taxes Applicable		
					Total Cost		
					(In words)		

- *The quoted solution must include all other active and passive components which isrequired for making the solution operational (Patch cord, patch panels etc…)*
- *The necessary server, operating system, database and any other required Licenses for Cloud Solution etc. would be provisioned by AI on its own and cost of the same would be built-in the solution proposed as per proposed Solution. No separate line items would be mentioned for these items in the BOM. The solution would be required to cater to the entire Data Centre infrastructure*

for which limited licenses for Cloud Management would be procured as part of this RFP. Licenses for Cloud Management of additional infrastructure, as applicable, would be procured in the future by the State.

B2 – Operational Support

S. No.	Operational Support	Amount Cost
1.	Support and Facility Management Services (FMS)	
	Total	

Note:

This Support shall be for the entire components / items / infrastructure of SDC under this RFP / Contract including the Support personnel deployed during the implementation for the project. This cost shall also include the implementation, integration requirement for making the infrastructure and cloud enablement solution operational.

Section – XIII

Annexure

Section XIII. Annexure

Annexure-I: - Proforma of Bank Guarantee towards Performance Security

PERFORMANCE GUARANTEE

(To be stamped in accordance with Stamp Act)

Ref: Bank Guarantee No. _____ Date: _____

To

The Chief Executive Officer,
Mizoram State e-Governance Society
Directorate of Information and Communication Technology
Old Secretariat Building I, Treasury Square,
Aizawl, Mizoram.

Dear Sir,

Whereas ..... (Name of Implementation Partner) hereinafter called "the BIDDER" has undertaken, in pursuance of Contract dated ... ...2023 (hereinafter referred to as "the Contract") for Upgradation of Infrastructure and Cloud Enablement for Mizoram State Data Centre.

AND WHEREAS it has been stipulated in the said Contract that the BIDDER shall furnish a Bank Guarantee ("the Guarantee") from a Nationalized Bank/Scheduled Bank located in India having at least one Branch in Mizoram for performance of the equipment supplied and installed under MSDC as per the contract agreement.

WHEREAS we ("the Bank", which expression shall be deemed to include it successors and permitted assigns) have agreed to give the Mizoram State e-Governance Society, the Guarantee:

THEREFORE, the Bank hereby agrees and affirms as follows:

The Bank hereby irrevocably and unconditionally guarantees the payment of Rs……. (being 10% of the sum of order value) to **MSeGS** under the terms of their Agreement dated __ on account of full or partial non-performance / non-implementation and/ or delayed and/ or defective performance / implementation. Provided, however, that the maximum liability of the Bank towards **MSeGS** under this Guarantee shall not, under any circumstances, exceed in aggregate.

In pursuance of this Guarantee, the Bank shall, immediately upon the receipt of a written notice from MSeGS, stating full or partial non-implementation and/ or delayed and or defective implementation, which shall not be called in question, in that behalf and without delay/demur or set off, pay to MSeGS, any and all sums demanded by MSeGS, under the said demand notice, subject to the maximum limits. A notice from MSeGS, to the Bank shall be sent by Registered Post (Acknowledgement Due) at the following address:

Attention Mr _____

This Guarantee shall come into effect immediately upon execution and shall remain in force for a period of 12 months from the date of its execution. However, the Guarantee shall, not less than 30 days, prior to its expiry, be extended by the Bank for a further period of 12 months. The Bank shall extend the Guarantee annually in the manner herein before provided for a period of one year from the date of issue of this Guarantee.

The liability of the Bank under the terms of this Guarantee shall not, in any manner whatsoever, be modified, discharged, or otherwise affected by:

any change or amendment to the terms and conditions of the Contract or the execution of any further Agreements.

any breach or non-compliance by the BIDDER with any of the terms and conditions of any Agreements/credits arrangement, present or future, between Bidder and the Bank.

The BANK also agrees that MSeGS, at its option shall be entitled to enforce this Guarantee against the Bank as a Principal Debtor, in the first instance without proceeding against BIDDER and not withstanding any security or other guarantee that MSeGS, may have in relation to the BIDDER's liabilities.

The BANK shall not be released of its obligations under these presents by reason of any act of omission or commission on the part of MSeGS, or any other indulgence shown by MSeGS, or by any other matter or thing whatsoever which under law would, but for this provision, have the effect of relieving the BANK.

This Guarantee shall be governed by the laws of India and only the courts of Guwahati High court, Aizawl Bench, Mizoram shall have exclusive jurisdiction in the adjudication of any dispute which may arise hereunder.

Dated this the ……. Day of ……..2023

Witness:

(Signature)	(Signature)
(Name)	(Name)
(Office Address)	Bank Rubber Stamp
	Designated with Bank

Stamp Plus Attorney as per Power of Attorney No. _____ Dated: _____

Annexure-II: Format for Manufacturer Association Form

Ref. No._____ Date: _____

To,

The Chief Executive Officer,
Mizoram State e-Governance Society
Directorate of Information and Communication Technology
Old Secretariat Building I, Treasury Square,
Aizawl, Mizoram.

Sub: RFP ref no:

Dear Sir,

Please refer to your Notice Inviting Tenders for Appointment of an Agency for Upgradation of Mizoram SDC into Cloud Environment and Operational Maintenance.

M/S_____(Bidder), who is our reliable distributor for the last _____years, is hereby authorized to quote on our behalf for this prestigious tender.

We undertake the following regarding the supply of all the equipments and relatedsoftware as described in this tender

1. It will be ensured that in the event of being awarded the contract the machines will be delivered by M/s_(Bidder) & maintained by M/S _____ properly as per the conditions of the contract. For this purpose, we shall provide M/S _____(Bidder) necessary technical support including technical updates, software version updates (such as Firmware, Operating System) and upgrades, required patches, replacements & spares to the Bidder as per the RFP conditions. If M/ s_____ fails to maintainthe hardware/ software and State is compelled to appoint an operator due to non- maintenance of the equipment supplied by us or for any other reason whatsoever, we will provide necessary support to the new operator who is a authorized partner to us for the remaining period of the project as per the RFP and SLA to be signed with the Bidder, in the event of his being successful. An original copy of equipment warranty (repair / replacement) shall be submitted to the client/ purchaser at the time of installation.
2. The equipment supplied will not be under end of life/ end of sale within the duration of project. Also, the supplied equipment in this project should not be declared end of support within five years of its installation (i.e. from the day of Final Acceptance Test approval by MSeGS). In case it happens M/s_____will have to replace that equipment with equivalent new equipment.
3. If due to any reason whatsoever, the tie up between our Company & M/S_____(Bidder) breaks down subsequently or supply/ installation does not take place for a reason not attributable to State, alternative arrangements as prescribed in pt-1 will apply.

.

Yours faithfully,

(NAME) (Name of manufacturers)

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. It should be included by the Bidder in Pre-Qualification Criteria.

Annexure-III: Abbreviations

Abbreviations	Definition
MSeGS	Mizoram State e-Governance Society
MSDC	Mizoram State Data Centre
IA	Implementing Agency
IT	Information Technology
SDA	State Designated Agency / MSeGS
BOQ	Bills of Quantity
EMS	Enterprise Management System
FAT	Final Acceptance Test
HDD	Hard Disk Drive
IP	Internet Protocol
LAN	Local Area Network
QGR	Quarterly Guaranteed Revenue
DCO	Data Centre Operator
DCCO	Data Centre Cloud Operator
FC	Fiber Channel
FCIP	Fiber Channel over IP