EXPRESSION OF INTEREST (EOI)
FOR
SELECTION OF SUITABLE SOLUTION
FOR IMPLEMENTATION OF PRIVATE CLOUD FOR ANDHRA PRADESH FIBERNET LIMITED

NO. APSFL/EOI/PDC/2022, DT: 19.12.2022

Andhra Pradesh FiberNet Limited

A 3rd Floor, NTR Administrative Block, Pandit Nehru Bus Station, NH 65, Vijayawada-520001, Andhra Pradesh, India.

Andhra Pradesh FiberNet Limited, Government of Andhra Pradesh invites Expression of Interest (EoI) for Selection of Suitable solution for **Implementation of Managed Private Cloud Solution enabling as-a-Service at APSFL, IIDT Building Tirupati.** Only MeitY approved Cloud Service Providers shall submit their EoI. MeitY approved CSP's partner/Vendor or others EoI will not be accepted.

1.	EOI No. & Date	APSFL/EOI/PDC/2022, DT: 19.12.2022
2.	Brief description of Job	Selection of solution for Implementation of Private Cloud enabling as a Service Model at APSFL, IIDT Building Tirupati.
3.	Last date & time of EOI Submission	02.01.2023 & 4:00P.M
4.	Date & time of EOI Opening	02.01.2023 & 4:00P.M
5.	Pre-Bid Meeting date & time	27.12.2022 at 03.00 Hrs.
6.	Address of Communication for queries, if any	3rd Floor, NTR Administrative Block, APSFL corporate office, Vijayawada - 520010
7.	Venue of Pre Bid Meeting / EOI Submission / EOI Opening	3rd Floor, NTR Administrative Block, APSFL corporate office, Vijayawada - 520010
8.	Contact Person	Chief Technology Officer, APSFL
9.	Representative of CSP must be present at the time of opening of the EoI. Department of IT&E are not answerable for any queries of any bidder who remain absent at that time	
10.	Any proposal received by Andhra Pradesh State Fibernet Limited after the deadline for submission of EoI may not be accepted. Andhra Pradesh State Fibernet Limited reserves the right to accept of the late entries	
11.	Andhra Pradesh State Fibernet Limited reserve the right to reject or accept or withdraw the EOI without assigning the reasons thereof.	
12.	The sealed envelope containing the bid documents must be submitted at Andhra Pradesh State Fibernet Limited 3rd Floor, NTR Administrative Block, Pandit Nehru Bus Station, NH 65, Vijayawada-520001, Andhra Pradesh, India. before closure of submission dated & time. The bid may also be sent through post / speed post/Courier. No other mode of delivery shall be accepted. APSFL will not be responsible for any postal delay.	
13.	Date for presentation will be communicated to selected CSP through email after completion of EOI evaluation process	

Objective of the EoI

Andhra Pradesh State Fibernet Limited, Government of Andhra Pradesh, has taken an initiative to build a state of art modern Managed Private Cloud facilitating as-a-Service model at APSFL,IIDT Building Tirupati, GoAP. The Managed Private Cloud Platform should provide the latest technology like software defined Datacenter allowing services (mentioned in Scope of Work) to be consumed in 'As a Service' model providing high and predicable performance, security, High Availability and reliability.

Managed Private cloud platform should provide unified stack with all IaaS & PaaS services enabling build of cloud native applications, technical upgradation of existing applications with containers / micro services.

Only MeitY approved Cloud Service Providers shall be submitting their EoI. MeitY approved CSP's partner/Vendor or others EoI will not be accepted.

Eligibility Criteria

1. This EoI is limited to MeitY cloud empanelled CSPs. The MeitY empanelled Cloud Service Providers (CSPs) shall submit a copy of the MeitY cloud empanelment letter.
2. The CSP shall offer their public cloud services in India through min 2 datacenters in 2 different seismic zone. Details to be submitted.
3. CSP's offered Public Cloud offering should be in Gartner's Magic Quadrant for Cloud Infrastructure and Platform for report published on July 2021
4. CSP should have ISO 27001/17/18 Privacy Information Management certification.
5. CSP should have SOC certification i.e. SOC 1 and 2

Scope of Work / Solution proposed by CSP

- The outcome of the EoI is to get the proposals for following two models. Therefore, the cloud service providers shall offer their technical proposals for the above scope (IaaS & PaaS) in the following two models at both DC and DR.

  1. Infrastructure as a Service (IaaS)
  2. Platform as a Service (PaaS)

- The solution should provide the deployment flexibility of IaaS/PaaS services as available in the public cloud of the same CSP.

- The CSPs shall make the services available online, on-demand and dynamically scalable up or down as per request for service from the end users (user Department) with two-factor authentication via the SSL through a web browser.

- The Service shall provide auto-scalable, redundant, and dynamic computing capabilities.

- The solution is to run some cloud services locally & connect to a broad range of services available in the local cloud region. Run applications & workloads on premises using familiar cloud services, tools, and APIs.

- The solution shall support workloads & devices that require low latency access to on-premise systems, local data processing, data residency & application migration with local system interdependencies.

- The solution shall offer preconfigured datacenter infrastructure (Servers, virtualization, networking etc.) offering Infrastructure & Platform as a service. Infrastructure services (compute, storage, networking) & Platform services (Data management, DevOps, Integration, Security, Analytics, AI/ML services, marketplace, etc.) shall be available on demand to be consumed as a service.

- CSP shall ensure that VMs receive OS patching, health checking, Systematic Attack Detection, and backup functions.

- Monitor VM up/down status and resource utilization such as RAM, CPU, Disk, IOPS and network.

- The solution to be deployed on-premise location at APSFL, IIDT Building, Tirupati, Andhra Pradesh.

- The CSP shall provide the Cloud infrastructure and platform (such as MSSQL, PostgreSQL, DB2, Oracle, JBoss, WebLogic, WebSphere and others) to run the applications created using programming languages, libraries, services, and tools supported by the CSP. Further, shall provide a broad range of application infrastructure (Middleware) that supports a range of capabilities such as database management (with both SQL and NoSQL database), integration services, business process management, business analytics services, rules engines, event processing services and mobile back-end services. The Department shall not manage, own or control the underlying Cloud infrastructure including network, security, servers, operating systems, or storage, but has control over the deployed applications and possible configuration settings for the application-hosting environment.

- The Solution shall provide developers and operators with a "Push and pull" mechanism for deploying and running applications

- It is estimated that private cloud solution would broadly comprise of Infrastructure as a Service and would cater to the emerging requirements of GoAP in terms of

  a) Information requirements for analytical needs for data lake
     i. The process of absorbing data (structured, semi-structured and unstructured) into the data lake from different sources or data ingestion.
     ii. Implementation of tools and techniques for artificial intelligence and machine learning.
  b) Other legacy systems like mail and messaging, document management systems etc.
  c) To ensure continuity of operations and quick recovery during disasters and unplanned events that may adversely affect operational expectations.

- The Solution provide API Management capabilities - for ex: providing a level of control, so that only authorized users can access the API and each user can only access those capabilities for which they have permission.

- The offered solution shall combine the elasticity & utility of the public cloud with the granular control, security & predictability of on-premises infrastructure to deliver high-performance & cost-effective cloud services

- The Solution shall support vertical & horizontal scalability on demand. During peak periods (decided by the Department) should provide the ability to allocate compute & storage capacity on demand & once the peak period is over, provide the ability to release the capacity for other workloads to leverage.

- The solution should deploy low latency networks, non-blocking network design with off-box network virtualization & RDMA inter-cluster networking to provide predictable network performance for the most demanding workloads.

- The solution architecture shall have a security first design & customer's data sovereignty goals must be met. The control plane & data plane of proposed Managed Cloud Platform Shall remain on-premise with no dependency on public cloud for the Implementation, Management and Operations.

- The proposed solution should offer Help Desk and Application Management Service.

- The proposed solution should provide cloud tooling and automation for Kubernetes, Docker, server less functions, Application programming Interface (API's) and Kafka as well as DevOps tools for the entire software development lifecycle. It should also offer a comprehensive set of open source solutions in the form of managed and marketplace services.

- The Solution should offer Compute with Bare Metal, VMs, Dense/IO, HPC, and GPU shapes.

- The Solution should offer with dynamic scaling(up/down) for processor core and memory.

- The Solution should offer highly durable block storage options without the need to configure any software-based protection.

- The Solution should offer option of local NVME storage for compute shapes with higher performance SLAs.

- The Solution should offer Object storage services with REST API access to buckets and objects. Accessibility shall be provided and secured by strong id organization and access management policy.

- The Solution should offer data at rest encryption by default for object storage services with self healing capability for data integrity.

- The solution should offer tiering capability across the object storage service for efficient lifecycle management.

- The solution should offer capability to store archive(s) with minimum retention period of 90 days and data at rest shall be encrypted by default.

- The solution should offer capability to Maintenance free file storage services with support for NFSv3 for Windows, Linux and Solaris, as a built-in service and with snapshot capability.

- The Solution should provide Virtual Networking, Various Networking Gateways, Private Connectivity, Traffic Management Steering, Cluster Networking for HPC, Software defined Load Balancing, and Low Latency connectivity between services.

- The solution shall offer the SLAs for availability, manageability, and performance as in a public region. The SLAs shall be available on the website (with public access) of the CSP.

- The per unit price of the service(s) in the managed private cloud shall be same as the services in the public cloud of the same CSP. Department shall only pay for services consumed. (pay-per-use model) Department shall get to use all existing CSP tools like budgets, cost analysis, invoices, & usage reports to monitor & audit usage of the services being consumed from the managed private cloud. The rate card shall be available on the website of the CSP & there shall not be any hidden charges. Department will purely procure the services in 100% OPEX model, hence the associated hardware stack shall be owned & maintained by the CSP only.

- The managed private cloud shall get the upgrades with new features as they become available in public cloud of the same CSP. Additionally, the CSP shall continually execute security updates to ensure Department can maintain the highest levels of security.

- The Solution should include 24x7 on-site support where the CSP/MSP representative is available to rapidly troubleshoot & fix any hardware related issues.

- The CSP shall provide the list of pre-requisites required for building this managed private cloud at IIDT Building, Tirupati, and Andhra Pradesh.

- The networking equipment covering SDN shall be provided for interconnection in this managed private cloud solution.

- The managed private cloud solution shall be compliant with SOC 1, SOC 2, ISO 27001/17/18, and HIPAA & PCI-DSS. Audits shall be conducted every six month.

- The CSP shall have access to the following only:
  1. Capacity utilization data
  2. Billing data
  3. Monitoring metrics
  4. Incident metadata
  5. The SIEM data stay within the managed private cloud. The Security team shall run queries inside a console that is located within the managed private cloud. The results of that query shall stay in managed private cloud. A query output may be preserved & returned to the Security team at the CSP's end over the VPN connection to support an investigation.
  6. Government application & data shall not be accessed by the CSP personnel or are leaving the managed private cloud.

- The CSP shall secure its rack cages & only CSP representatives shall have access to infrastructure running in this managed private cloud.

- One dedicated Technical Manager (TM) shall be primary point of contact to facilitate account management, provide end-to-end service management and delivery oversight, construct and maintain a service delivery plan, assist with any escalations, and conduct periodic service reviews and account reviews.

- Add environments for test, development, or disaster recovery. Add additional security services to further secure IT stack and mitigate risk. Managed IaaS Service: Complete 24/7 lifecycle management including provisioning, management, patching, backups, maintenance, and access control for all guest VMs and associated operating systems.

- The CSP to give details of the elastic capacity of the cloud during the traffic ups and downs.

Evaluation Procedure

• The Eligibility Criteria will be evaluated by Committee and those who qualify will be considered for Technical presentation with Approach Solution submitted by the CSP. The CSP to give details of the approach solution for IAAS and PAAS.

• After Technical presentation with solution approach submitted by CSP. Department will select the most suitable Proposal and the Solution from a single or a mix of Solutions from the proposal received based on evaluation of Approach Solution submitted by CSP.

Technical Presentation and Approach Solution for purpose of this EoI is to design the solution (IAAS and PAAS) defined in the scope and functional requirement of this EoI. The applications shall give a technical demonstration on On-Premise and/or Public Cloud services/ Hybrid cloud with the capabilities, pros and cons, commercial Constructs involved in each solution to prove the idea and feasibility as envisioned by Department of IT&E, GoAP.
      b. The applicant shall validate initial productivity rates and cost/benefit projections
      c. Each Applicant shall demonstrate the process flow as mentioned above for the purpose of

Presentation which shall be assessed based on the following test criterions:
      i. Ease of provisioning
      ii. Types of CSP Model
      iii. Deployment and Migration Model
      iv. Security Feature
      d. CSP can demonstrate value added features and functionalities as part of their solution.

Instruction to CSP

The CSP is required to meet the following criteria and submit documentary proof along with their offer.

1. Due diligence should be exercised while providing information against the EoI. Unnecessary or irrelevant information shall not give any advantage to the agency. Only relevant and precise information should be provided.

2. Suppression of material fact/misstatement of information, if detected at any stage will lead to cancellation of the bid.

3. Interested CSP shall submit their EoI in a sealed envelope. Sealed Envelope should be super-scribed with "EOI number & due date".

4. The following documents to be submitted:
   - EOI Declaration
   - Documents against Eligibility Criteria
   - Copy of GST Registration

EOI DECLARATION

To
Andhra Pradesh State FiberNet Limited
3rd Floor, NTR Administrative Block,
Pandit Nehru Bus Station, NH 65,
Vijayawada-520001, Andhra Pradesh, India.

Sub : Selection of Suitable solution for Implementation of Private Cloud using as Service at APSFL, IIDT Building Tirupati.GoAP.

Dear Sir,

1. We the undersigned bidder/(s) declare that we have read and examined in details in the documents of the subject EOI No.XXXXXX dated 00.00.2022 for Selection of Suitable solution for Implementation of Private Cloud using as Service at APSFL, IIDT Building Tirupati.GoAP.

2. We are enclosing necessary information according to the desired format. The information furnished by us in this Expression of Interest is correct and best to our knowledge. If at a later date it is revealed that any declaration made by us is false / incorrect, then our bid would automatically stand cancelled.

3. We agree that if our proposal is accepted and qualified then we shall provide abide by all the instruction of Department of IT&E.

4. We understand that Department of IT & E reserves the right to decide whether or not to pre-qualify our firm without disclosing the reason whatsoever.

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

Thanking you, we remain

Yours faithfully

…………………………………………………
Signature

……………………………………………………..
Name in full

……………………………………………………..
Designation

……………………………………………………..
Company Stamp

Dated, this …………………..day of ………………2022

BIDDER'S DETAILS

(EOI No.APSFL/EOI/FD/19-20/002 dated 17.07.2019)

1	**Name of the Firm**	
2	**Correspondence / Contact address**	
	Name & Designation of Contact person	
	Address	
	Contact Number	
	PAN	
	E-mail Address	
3	**Office at Kolkata**	
	Office Address	
	Name & Designation of Contact person	
	Contact Number	
	E-mail Address	
4	Is the firm registered with Sales Tax department? If yes, submit valid GST Registration certificate.	
5	GST Registration No.	
6	List the major clients with whom your organization has been / is currently associated.	

Authorized Signatory (Signature In full): _____

Name and title of Signatory: _____

Company Rubber Stamp: _____