

OPERATIONS AND MANAGEMENT OF KERALA STATE DATA CENTER 1 & 2

1 Eligibility 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 Operate and Manage two data centres (State Data Centre 1 & State Data Centre 2) each with 1000 m² farm area and successfully provide Cloud Solution and required support services sought by the State. The Bids must be complete in all respect and shall 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

S.No	Clause	Document required
1.	The Bids shall be submitted by only the Bidder; no consortium is allowed in this Bid	Declaration in this regard needs to be submitted
2.	The Bidder shall have a positive net worth in each of the following years 2013-2014, 2014-2015, and 2015-2016	A certified document by the Chartered Accountant stating the net worth.
3.	The Bidder's average annual turnover shall be at least INR 75 Crores in each of the last three financial years viz; 2013-2014, 2014-2015, and 2015-2016 Note: The turnover refers to the Bidder's firm and not the composite turnover of its subsidiaries/sister concerns etc.	Profit & Loss Account Statement of audited balance sheet or CA Certificate in absence of audited balance sheet
4.	(a) The Bidder shall be an established information Technology company registered under the Companies Act, 1956 and in operation for at least 5 years as on 31.03.2016 and shall have their registered offices in India. (b) The company must be registered with appropriate authorities for all applicable statutory duties/taxes	(a) Valid documentary proof of: <ul style="list-style-type: none"> • Certificate of incorporation • Certificate of Commencement • Certificate consequent to change of name, if applicable (b) Valid documentary proof of: <ul style="list-style-type: none"> • Central Sales Tax/VAT number • Service Tax registration number • Income Tax registration/PAN number

		<ul style="list-style-type: none"> Income Tax returns for the Financial years 2013-2014, 2014-2015, and 2015-2016
5.	<p>The bidder should have experience in successfully completing Operation and Management services for at least two data centres, during the last five years as on 31/03/2016</p> <p>Note: Bidder's in house data centres shall not be considered.</p>	<ol style="list-style-type: none"> Work Orders confirming year and area of activity Customer satisfaction certificate from two end users including scope of work, period of O&M and project cost.
6.	The bidder must have a valid ISO 9001:2000 certificate (issued in India).	Valid Copy of the Certification stating the location and the scope of the certification
7.	<p>a) The Bidder must have Technically qualified professionals on its roll with combination in the following fields as on 31.03.2016 :</p> <ul style="list-style-type: none"> System integration, networking & prior experience in providing the Data Centre Infrastructure maintenance services Virtualization and cloud solution implementation experience 	Certificate from Bidder's HR Department for the number of Technically qualified professionals employed by the company with their skill set
8.	The Bidder must have implemented/ commissioned at least one Cloud solution in Data Centre in India 31.03.2016 (Cloud Implementation for providing Cloud based services in their own Data Centre or on to the customer Data Centre shall be considered)	<ol style="list-style-type: none"> Work Orders confirming year and area of activity Valid Work Order and Certificate from the Client in case implementation/ commissioning in Client Data Centre <p>OR</p> <ol style="list-style-type: none"> Declaration from the Company Secretary confirming the Cloud Implementation in their own Data Centre for providing services to the customers Customer satisfaction certificate confirming the performance of cloud services from the Bidders Data Centre

9.	The Bidder shall furnish, as part of its Bid, an Earnest Money Deposit (EMD) of Rs. 35,00,000 (Thirty Five Lakhs Only)".	The EMD shall be denominated in Indian Rupees. EMD may be submitted by Bank Guarantee valid for period of one year, else Demand Draft / Pay Order of any Commercial Bank drawn in favour of KSITM payable at Thiruvananthapuram
10.	The Bidder shall not be under a Declaration of Ineligibility for corrupt or fraudulent practices or blacklisted with any of the Central / State Government agencies.	Declaration in this regard by the authorized signatory of the Bidder
11.	The Bidder shall submit valid letter from all the OEMs confirming the following: <ul style="list-style-type: none"> • 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 OEM support for the product quoted has been stopped/ withdrawn during the tenure of the project, the same shall be replaced with the superior product at no extra cost • Undertake that the support including spares, patches, and upgrades for the quoted products shall be available for the period of 5 years from the date of acceptance. 	Relevant documentary evidences like Authorization letters MAF (Manufacturers Authorization Form) from all Vendors whose products are being quoted by the Bidder need to be attached in the proposal)
12.	Certificate by authorized signatory confirming acceptance of all tender terms and conditions	Section IX
13.	Authorization of signatory for the purpose of this tender	Power of Attorney

Note:

- If any of the Bids is found to be without proper signature, page numbers and index, it will be liable for rejection.
- Bidder is to fill the above annexure and indicate the page numbers of the supporting document in the Proof while submitting response to the eligibility criteria.
- Relevant portions, in the documents submitted in pursuance of eligibility criterion (1) to (13) mentioned above, shall be highlighted. If a tender is not accompanied by all the documents

mentioned (1) to (13) above, the same would be rejected outright. Undertaking for subsequent submission of any of the above document will not be entertained under any circumstances.

- Bidders must ensure that all required documents have been uploaded/submitted along with the bid to justify his/her eligibility. Bidders may be asked to show all required documents from the bid to justify his/her eligibility on day of opening the bid itself.
- No Additional documents/clarifications will be asked from bidders at any stage and tenders will be evaluated on the basis of documents already submitted by the bidder.

2 SCOPE OF WORK

The selected bidder shall Operate & Manage SDC 1 & 2 and provide cloud solution in state data centre 1 as per the scope and period of the contract.

The minimum specified work to be undertaken by the bidder for providing cloud solution in SDC 1 and operation & management of SDC 1 & 2 has been categorized as under:

- Take control from existing Data Centre Operator(s)
- Operation and Management of SDC 1 & 2
- Supply, Installation, Testing & Commissioning of cloud solution in SDC1.
- Exit management at the end of contract period.

2.1.1 Summary

- Detailed Verification & Acceptance of Sites & Inventory.
- Detailed Verification & Acceptance of Engineering/Configuration Documents.
- Detailed Verification & Acceptance of Process Documents/Registers.
- Detailed Verification & Acceptance Equipment, Configuration, Operational Status, Standard Operating Procedures etc.
- Storage, Safe-Keeping & Security of Infrastructure including all equipment, documents, etc. available in the existing State Data Centre 1 & 2.
- Co-Location of Servers in the Data Centre (Staging services including IP allotment, network resources allotment and configuration, security configuration, rack mounting and powering support).
- Co-Hosting of Services/applications in the Data Centre (server resources allotment, application & database configuration, security configuration).
- Migration of existing Co-hosted applications in SDC 1 & SDC 2, to the cloud in a phased manner.
- Facilitate hosting of departmental applications on Cloud and Virtualized Environment at the SDC 1:
 - Provision of Virtual Machines based on the requirement of the user department.
 - Maintaining catalogue and templates in the self service provisioning portal
 - Ensuring Connectivity of servers to the LAN and SAN Storage
 - Ensuring required configuration for maintaining virtual IP and switch where the virtual machines do the communication
- Server Monitoring, Administration & Management Services
- Help Desk and Network Management Services
- System Administration, Database administration, Email and Proxy Service Management, Web & Application Servers Management, LDAP, DNS support.
- Management of Centralised Data Storage for applications being co-located/hosted, management of Data Backup & Retrieval as per the backup policy for applications being co-located/ hosted, services of virtual machines, Antivirus Management, SMTP Gateway, Resource Monitoring and SLA Reporting for Servers.

- MIS Reports
- Payment of electricity charges, water charges, telephone charges, diesel expenses for DG.
- All routine and preventive maintenance operations, including documentation, as may be necessary to ensure availability and performance of all equipment/services available in the existing State Data Centre 1 & 2 as per technical and operational specifications of best practices, standards, custom requirements as per service levels.
- All engineering changes, including but not limited to installation/reinstallation, configuration, integration, testing, commissioning & documentation as may be necessary to match technical and operational specifications of best practices, standards, custom requirements, patches, upgrades or performance improvement of existing equipment, its components or services in the existing State Data Centre 1 & 2.
- All engineering support, including but not limited to configuration, integration & testing as per technical and operational requirements for facilitating IT Services from and to the existing State Wide Area Network as may be necessary.
- All engineering support, including but not limited to design, configuration, and integration and testing as per technical and operational requirements for facilitating IT Services from and to the proposed State Data Centres & Disaster Recovery Centres, the National Wide Area Network, the State Government Campus Networks & the State Government Department Networks as may be necessary.
- Proactive and reactive maintenance, repair and replacement of defective components installed through this RFP, at the SDC. The cost for repair and replacement shall be borne by the bidder.
- Any component that is reported to be faulty / non-functional on a given date shall be either fully repaired or replaced by temporary substitute (of equivalent configuration) within the time frame agreed upon in the Service Level Agreement (SLA).
- Managing and maintaining the electrical system -Transformer, Generator, UPS and battery, electrical panel, AC, lighting, cabling etc.
- Managing the BMS – Access control system, Surveillance system, Fire detection and suppression system, Water detection system, EPBAX, rodent control, public address system; Manned security – round the clock.
- General maintenance of the Data Centre, including the office, pantry, toilets, furniture etc.
- All necessary Office Stationery Items required for the routine operation.
- All logs of all activities of Data centre.
- The following recurring expenditure attributed to infrastructure lease and utility charges are not included in the above scope of work.
 - Rental for Space / Building.
 - Building Tax.
 - Electricity Charges.
 - Water Charges.
 - Diesel Expenses.
 - Telephone Charges

3 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 provided by the DCO to KSITM for the duration of this contract. The Penalty shall be calculated on a quarterly basis by TPA or any agency appointed by KSITM.

3.1 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 Data Centre Equipment / specified services that may lead to disruption in normal operations of the State Data Centre 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 $\text{Availability \%age} = \frac{\{\text{Agreed Service Time} - \text{Down Time}\}}{\{\text{Agreed Service time}\}} * (100\%)$.
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. **“Response time”** is defined as the time between receipt of the incident by support team and its logging / generation of ticket on the system.
7. **“Resolution Time”** shall mean the time taken (after the incident has been reported at the helpdesk), in resolving (diagnosing, troubleshooting and fixing) or escalating (to the second level or to respective Vendors, getting the confirmatory details about the same from the Vendor and conveying the same to the end user), the services related troubles during the first level escalation. The resolution time shall vary based on the severity of the incident reported at the help desk. The severity would be as follows:
 - a. **Critical:** Incidents whose resolution shall require additional investment in components or time or shall involve coordination with OEMs. These incidents shall impact the overall functioning of the SDC. For example, purchase of printer, router, software bug fixing etc.
 - b. **Medium:** Incidents, whose resolution shall require replacement of hardware or software parts, requiring significant interruption in working of that individual component. For example, installation of operating system, replacement of switch etc.
 - c. **Low:** Incidents whose resolution shall require changes in configuration of hardware or software, which will not significantly interrupt working of that component. For example, installation of printer on a client, replacement of LAN chord etc.

3.2 Planned Downtime

Planned downtime shall mean any time when the 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 State 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.

3.3 Service Levels

This SLA document provides for minimum level of services required as per contractual obligations based on performance indicators and measurements thereof. The DCO 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 DCO shall be reviewed by KSITM, which will:

- Regularly check performance of the DCO 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. Taking control Service Level.
2. Implementation Service Related Levels
3. Compliance and Reporting Service Levels
4. IT Infrastructure Related Service Levels
5. Physical Infrastructure related Service levels

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

3.3.1 Taking Control Service Level

Service	Target	Severity	Penalty
Taking over SDCs from existing DCO	Four weeks from Letter of Intent	Critical	A Penalty as 0.5% per week for first two weeks, 1% per week for every subsequent week. Subject to a maximum of 10%.

3.3.2 Implementation service levels

S.No	Service Category	Target	Penalty
1.	Supply, Installation and Commissioning	12 weeks from the taking over from DCO.	<p>Penalties will be applicable after 12 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)</p> <p>A penalty of 1% per week for first two weeks, 2% per week for every subsequent week subject to a maximum of 10%. Penalty will be computed on the final CAPEX value of contract between State and DCO.</p>
2.	Final Acceptance Test	2 weeks from the commencement of completion of commissioning.	<p>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)</p> <p>A penalty of 1% per week for first two weeks, 2% per week for every subsequent week subject to a maximum of 100%. Penalty will be computed on the final CAPEX value of contract between State and DCO.</p>

3.3.3 Compliance and Reporting

S.No	Measurement	Definition	Target	Penalty
1.	Submission of MIS Reports	The DCO shall submit the MIS reports as requested by the KSITM. Format shall be approved by KSITM within a month of being awarded the contract.	Report for the previous quarter shall be submitted to the State by the 5th day of beginning of current quarter.	0.5 % of the QGR for every 1 day of delay in submission on an incremental basis to a maximum of 2%.

3.3.4 IT Infrastructure related Service Levels

Following outlines the service level indicators & and the target performance levels to be maintained by the Agency during the contract period. These SLAs shall be strictly imposed and a third party audit/certification agency shall be deployed for certifying the performance of the Agency against the target performance metrics as outlined in the table below:

S.No	Measurement	Target	Severity	Penalty
1.	Server Availability (including the Hypervisor, VM, database, applications and OS running on it)	=>99.75% <= 99.75%	Critical	No penalty 0.5% of the QGR for every 4hours of down time at a stretch or in parts up to total downtime of 16 hours. This downtime shall be calculated over and above the total hours of downtime permissible. Beyond 16 hours of down time,1% of the QGR for every 2hour of down time at a stretch or in parts.
2.	Storage Availability	=>99.75% <= 99.75%	Critical	No penalty 0.5% of the QGR for every 2hours of down time at a stretch or in parts up to total downtime of 10 hours. This downtime shall be calculated over and above the total hours of downtime permissible.

				Beyond 10 hours of down time, 1% of the QGR for every 2hour of down time at a stretch or in parts.
3.	Network Availability (Active & passive components)	=>99.75% <= 99.75%	Critical	No penalty 0.5% of the QGR for every hour of down time at a stretch or in parts up to total downtime of 5 hours. Beyond 5 hours of down time,1% of the QGR for every 1hour of down time at a stretch or in parts.
4.	EMS	SDC EMS System Uptime/ Availability	>= 99.75 Between 99.75% and 97.75% < 97.75%	No Penalty For every 0.25% degradation in the uptime there will be a penalty of 1% of QGR For every 0.25% degradation in the uptime there will be a penalty of 2% of the QGR. The maximum penalty enforced on the DCO would be up to 50% of QGR and the contract is liable for Termination and compensation paid to Kerala State IT Mission.

3.3.5 Physical Infrastructure related Service levels

S.No	Components	Parameter	Uptime	
1.	Power availability (DG, UPS etc.)	Availability will be measured up to the socket level in the equipment room that will be providing power to the racks	>= 99.75	No Penalty
			Between 99.75% and 99.00%	1 % of the QGR
			Between 98.99% and 98.00%	3% of the QGR
			<=97.99	4% of the QGR
2.	PAC Availability	Availability will be measured up to the socket level in the equipment room that will be providing power to the racks	>= 99.75	No Penalty
3.	CCTV Availability		>= 99.75	No Penalty
			Between 99.75% and	For every 0.25% degradation in the uptime there will be a penalty of 1% of QGR
			< 97.75%	For every 0.25% degradation in the uptime there will be a penalty of 2% of the QGR. The maximum penalty enforced on the DCO would be up to 50% of QGR and the contract is liable for Termination and compensation paid to Kerala State IT Mission.
4.	CCTV Footage availability	The DCO is required record 5-8 frames per second of CCTV footage	The DCO should maintain CCTV recordings of past 7	Letter of warning

		and should maintain sufficient inventory of the same.	days at any given point in time. After which the DCO is required to take a backup of the same and store it for a period of 6 months.	
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3.3.6 SLA Compliance Review Process

- The DCO 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 State, 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.
- SLA may be revised after every 1 year with mutually acceptable terms between DCO and the State.

3.4 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 the State 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