

**M P STATE ELECTRONICS DEVELOPMENT CORPORATION LTD**  
**(A Govt. of M.P Undertaking)**

**Tender Document**

**For**

**Supply, Installation and Maintenance of Servers, SAN and other hardware components at Data Centre with Managed Continuity services for Election Commission of India, Bhopal**

(Tender no. MPSEDC/MKT/2010/191)

(All pages of this document except for Commercial-bid to be submitted in original duly signed on each page along with the technical bid envelope. The Commercial bid in original is to be enclosed in a separate sealed envelope)

**M.P. State Electronics Development Corporation Ltd.**

**147, Zone-I, M.P. Nagar, Bhopal-462011 (M.P.)**

**Ph.0755-2769816, 2769823**

**Fax: 0755-2769824**

## INVITATION FOR BIDS

Addl. Chief General manager, MPSEDC Ltd., Bhopal invites sealed bids, under two envelopes system, from bidders for Supply, Installation and Maintenance of Servers, SAN and other hardware components with Managed Continuity services at Data Centre for Election Commission of India, Bhopal. Interested bidders may obtain further information from the office of MPSEDC Ltd., Bhopal Bids are invited for the work mentioned hereunder:

S n	Items	Description
A	Scope of Work	Supply, Installation and Maintenance of Servers, SAN and other hardware components with Managed Continuity services at Data Centre for Election Commission of India, Bhopal
B	Cost of bid document	Rs.2500.00 (non-refundable) by Demand Draft/Cash
C	Sale of bid documents	Date 18.1.11 to 24.1.11 (Between 10.30 AM to 5.30 PM)
D	Last date of submission of bid	Date 25.1.11 up to 3.00 PM.
E	Date of opening of technical bid	Date 25.1.11 at 4.00 PM.
F	EMD	Rs.2,00,000/- in the form of Demand Draft payable to MPSEDC Ltd at Bhopal
G	Place of opening of bids:	Office of MPSEDC LTD., 147, Zone-1, Maharana Pratap Nagar, BHOPAL (M.P.)
H	Address for communication:	MPSEDC LTD., 147, Zone-1, Maharana Pratap Nagar, BHOPAL (M.P.)

**Note;** Tender can be downloaded from the website [www.mpsedc.com](http://www.mpsedc.com). In case tender form has been downloaded from the website, the tenderer will have to enclose a Demand Draft of Rs.2500/- (Rupees Two thousand Five Hundred only) of any scheduled bank in favor of MPSEDC Ltd. payable at Bhopal along with the tender.

**\*Any future Corrigenda/Information shall be posted only on our website [www.mpsedc.com](http://www.mpsedc.com)**

## 1. SCOPE OF WORK

1. Following is the scope of work to be performed by the selected vendor:

S. no.	Scope of Work Area	Description of Scope of Work/ Deliverables for the Activity
1.	General	<ol style="list-style-type: none"> <li>1. The selected vendor must sign SLA at the time of agreement with MPSEDC.</li> <li>2. The selected vendor must Deliver, install, configure and provide necessary support for Servers, Storage Unit, Tape Library Unit and related equipments</li> <li>3. The selected vendor must Deliver, install, configure and provide necessary support for any other hardware (including servers) that is required for the project</li> <li>4. The selected vendor must provide necessary support for Datacenter and Disaster Recovery Site to their respective vendor(s).</li> <li>5. The selected vendor must Install, configure and provide necessary support for software on servers and/or desktops</li> <li>6. The selected vendor must provide the Support staff/Administrators for Data Center operations.</li> <li>7. The selected vendor must providing necessary support and coordinate with LAN/WAN vendors.</li> </ol>
2.	Analysis	The selected vendor MUST clearly demonstrate in an effective and efficient manner the overall understanding of MPSEDC's requirements and the ability to meet the specific hardware requirements. The bidder MUST study the IT infrastructure needs of MPSEDC.
3.	Solution Implementation	<p>Following activities (but not limited to) needs to be performed by the selected vendor:</p> <ol style="list-style-type: none"> <li>i. Integration with Existing /Coming Infrastructure</li> <li>ii. Deployment of required Servers, Storage, Peripherals and Data Network at specified locations.</li> <li>iii. Create Logical IP Schemes with Routing Tables and ACL for Intranet and deploy the same with proper documentation.</li> <li>iv. Creation of logical and physical Security Plans for Data Center, Data Networks</li> <li>v. Security Policy Implementation etc</li> </ol>
4.	Testing and Acceptance	The selected vendor must build up an overall plan for testing and acceptance of system, in which specific methods and steps should be clearly indicated. The acceptance test plan will be defined by the selected vendor, agreed and approved by MPSEDC and include all the necessary steps to

		<p>ensure complete functionality, operation and performance of the system.</p> <ol style="list-style-type: none"> <li>i. All levels of testing will be conducted at the installation sites.</li> <li>ii. Testing must demonstrate that the new system satisfies the operational and technical performance criteria.</li> <li>iii. It is vendor's responsibility during the tests to evaluate and recommend any further changes to the infrastructure. Any recommendations for change will be discussed with MPSEDC.</li> <li>iv. The selected vendor must outline the methodology that will be used for testing.</li> <li>v. The selected vendor must define the various levels or types of testing that will be performed.</li> <li>vi. The selected vendor must provide necessary checklist/documentation that will be required for testing.</li> <li>vii. The selected vendor must describe how the testing Methodologies will conform to requirements.</li> </ol>
<b>5.</b>	External Tie Ups & Certification Support	The selected vendor will support and provide necessary inputs for Integrating the IT Infrastructure by coordinating with Application Developer for commissioning and smooth maintenance of the system.
<b>6.</b>	Operational Support and Maintenance (O and M)	The selected vendor shall provide operational support and maintenance services for a period of 3 years for overall system stabilization, solution maintenance, system administration, security administration, database administration, and end-user problem resolution, etc. The operational support shall ensure that the solution is functioning as intended and attending to all the problems associated in operation of the deployed system.
<b>7.</b>	Solution Warranty	The selected vendor MUST warrant that the systems and overall solution supplied shall have no defects arising from design or workmanship or any act or omission of the service provider. The warranty shall remain valid for a period of 3 years
<b>8.</b>	Comprehensive Training and Change Management	<p>The selected vendor is required to train/retrain if required the designated technical and end-user staff to enable them to effectively operate the system and shall undertake Change Management interventions as necessary to achieve project objectives.</p> <p>The selected vendor shall also be responsible for re-training the operators whenever changes are made in the solution.</p>

		<p>Deliverables:</p> <ul style="list-style-type: none"> <li>i. Change Management interventions</li> <li>ii. Advance Administration training for Data Center Administrators for 10 Days to perform required tasks.</li> <li>iii. User Training for officers/employees / vendors for project, in batch sizes not exceeding 30 for deployed system</li> <li>iv. Syllabus and Manual for Training plan for the departmental users to be approved by Competent Authority beforehand.</li> <li>v. Issue supporting documentation such as Training material, User Manuals, Maintenance Manuals, etc on 1:1 basis.</li> <li>vi. Sign-off from MPSEDC on Training.</li> </ul>
9.	Solution Documentation	<p>The selected vendor shall also include preparation of documents including Technical and User Manuals, Operational Manual, Maintenance Manuals, etc. vendor shall obtain the sign-off from Competent Authority for all the documents submitted for the solution.</p> <p>Deliverables:</p> <ul style="list-style-type: none"> <li>i. Technical, Operational and User Manuals for operation of the deployed solution.</li> <li>ii. Maintenance manuals for Data Center Equipments.</li> <li>iii. Network Diagrams for Data Center</li> <li>iv. Documentation of IP and Subnet Scheme, Routing Tables and ACL etc. deployed for Intranet.</li> <li>v. Documentation of all device configurations such as Router, Servers, SAN etc.</li> </ul>

## 2. Facility Management and Administration

### a. Service Support Requirements

- i. The service support contact point to be established on Toll Free No.
- ii. The call status report indicating the call received, call attended, call rectified and closed, call pending (with in /beyond limit) shall be required from the successful vendor on fortnightly basis. The details of components replaced during the period will also be made available by successful bidder.
- iii. Successful vendor should ensure the proper monitoring and timely call attending.
- iv. The successful vendor should ensure that problem in the supplied item be handled and rectified within 24 hours from the issuance of complaint.
- v. In order to avoid delay in work the defective item should be replaced with new one, before taking away the defective one.
- vi. The delay in rectification of call will result in penalty; prolonged and regular delays will be considered as poor after sales support and may result in vendor disqualification from participating in future MPSEDC purchases.

### b. System Management, Administration, and Security Requirement

- i. **General Requirements:** In addition to the management, administration, and security requirements specified in each sections covering the various hardware and software

components of the System, the System must also provide for the following management, administration, and security features at the overall system level.

System installation procedures should be self explanatory, menu driven and should require minimum user interaction. A detail on-line help for installation should also be provided. Installation procedure should set all the required system parameters for successful installation of the system. The bidder should take into account ease of deployment for while proposing a solution.

The Bidder shall preferably follow best practices for security.

**ii. Facility Management and Administration**

The Facility Management operations shall include the following tasks –

- Configuration of server parameters, operating systems administration and tuning.
- The service support should be provided by remotely established Management and Monitoring centre with SPOC (Single Point of contact)
- The Monitoring tool should be able to help manage large, heterogeneous implementations by continuously monitoring essential systems resources, automatically detecting bottlenecks and potential problems while proactively responding to events
- Operating system administration, including but not limited to management of users, processes, resource contention, preventive maintenance and management of upgrades including migration to higher versions and patches to ensure that the system is properly updated..
- Re-installation in the event of system crash/failures.
- Maintenance of a log of the performance monitoring of servers including but not limited to monitoring CPU, disk space, memory utilization, I/O utilization, etc.
- Event log analysis generated in all the sub systems including but not limited to servers, operating systems, databases, applications, security devices, messaging, etc.
- Ensuring that the logs are backed up and truncated at regular intervals
- Periodic health check of the systems, troubleshooting problems, analyzing and implementing rectification measure.
- Ensuring the upkeep of existing systems that would be reused and also incorporate necessary changes for new applications if any during the tenure of the contract.
- Troubleshooting issues in the infrastructure, network and application to determine the areas where fixes are required and ensuring resolution of the same.
- Identification, diagnosis and resolution of problem areas pertaining to the Server farm infrastructure and application and maintenance of assured SLA levels.
- Implementation and maintenance of standard operating procedures for maintenance of the infrastructure.

- Management of the user names, roles and passwords of all the relevant subsystems, including, but not limited to servers, applications, devices, etc.

System administration activities shall include the following tasks but not limited to the following -

- Configuring and apportioning storage space
- Setting up of working e-mail accounts and mailing lists
- Management and integration of databases
- Implementing security on the Internet / Intranet
- Performing periodic backup of data and automating reporting tasks
- Executing hardware and software updates when necessary.

### iii. **Storage and Database Administration**

The vendor shall administer the databases which have been setup in the server farm and provide a repository of information for Business Critical applications. Database Administration involves data backups & restores and monitoring the database server.

Storage and Database administration activities shall include the following -

- Installation and configuration of the storage system.
- Management of storage environment to maintain performance at desired optimum levels.
- Development of storage management policy, configuration and management of disk array, SAN fabric / switches, tape library, etc.
- Configuration of SAN whenever a new application is hosted at the server farm. This shall include activities such as management of storage space, volume, RAID configuration, zone, security, business continuity volumes, NAS, performance, etc.
- End-to-end management of database on continuous basis to ensure smooth functioning of the same
- Management of any changes to database schema, disk space, storage, user roles
- Review of Code of Conduct and configuration to improve performance of the application or to resolve bottlenecks if any.
- Performance monitoring and Databases on a regular basis including, preventive maintenance of the database as required.
- Applying patches and database upgrades as and when required with minimal downtime.

- Regular backups for all databases in accordance with the backup and archive policies and conduct recovery whenever required with appropriate permissions.
- Use of DBA tools related to performing database creation, maintenance, and database monitoring tasks
- The Database monitoring should seamlessly integrate with the same Dashboard/Portal and provide integration with the central event console.

#### iv. **Security Administration**

The system should allow user to change his/her password based on a given time frame as well as give the User the option to change his password at any time. The system should disable the User profile after three unsuccessful log-on attempts. The system should be able to log successful and failed attempts to the system.

The bidder MUST clearly state the measures, equipment and software for security functions in order to prevent system from risks. The bidders will have the prime responsibility of the risk control.

- Information, hardware and software MUST be secured to both internal and external parties (such as through password encryption).
- The security measures adopted MUST be of wide range and of high quality, to create confidence in the systems security and integrity. The system MUST be protected against deliberate or accidental misuse that might cause a loss of confidence in it or loss or inconvenience to one or more of its users.
- System level and application level authentication between sites and between applications within sites, if any, to ensure against security attacks

Security administration activities shall include the following –

- Root domain administration by creating the root and sub-domains and setting the root level security policies such as authentication mechanisms (single/multi factor), password policies such as password length, password complexity, password expiry, account lockout policy, certificate policies, IPSEC policies etc.
- Periodic reviews of domain level rights and privileges.
- Maintenance of an updated knowledge base of all the published security vulnerabilities and threats for related software, including, but not limited to, operating systems, application servers, web servers, databases, security solutions, messaging solutions, etc.
- Ensuring that patches / workarounds for identified vulnerabilities are patched / blocked immediately.
- Responding to security breaches or other security incidents and coordinate with respective OEM in case of a new threat is observed to ensure that workaround / patch is made available for the same.

- Implementation and periodic updating of the security policy.
- Operating system hardening through appropriate configuration and patch updates.

**Note:- The said Data centre will be located at the (National Informatics Centre)NIC Bhopal. NIC shall be responsible for appropriate cyber security, Firewall and Antivirus etc. Therefore all support can be extended to co-located ICT infrastructure under IDC services on the mutually accepted terms & condition.**

v. **Backup and restore**

The backup and restore functions will comprise of the following activities –

- Backup of operating system, database and application as per stipulated policies at the Server Farm.
- Monitoring and enhancement of the performance of scheduled backups, schedule regular testing of backups and ensure adherence to related retention policies.
- Ensuring prompt execution of on-demand backups of volumes, files and database applications whenever required by User Departments or in case of upgrades and configuration changes to the system.
- Real-time monitoring, log maintenance and reporting of backup status on a regular basis. Prompt problem resolution in case of failures in the backup processes.
- Media management including, but not limited to, tagging, cross-referencing, storing, logging, testing, and vaulting in fire proof cabinets.
- Physical security of the media stored in cabinets.
- Ongoing support for file and volume restoration requests at the Server Farm.

vi. **Server Management**

The vendor shall perform all system administration tasks like server management and operating system administration, user management, device management etc. The vendor shall ensure high availability of System resources to the users and to maximize the uptime of the system by diagnosing, detecting and rectifying the faults in time.

The Server Administration for any platform will comprise of the following activities –

- Starting/Shutdown servers or services at Server Farm
- Monitoring performance of server resources (CPU Usage, Memory, disks)
- Monitoring access logs and application logs
- Purging of files and logs
- Taking data backup and restoration

- Applying service packs, fixes, updates and security patches
- Providing helpdesk related administrative support
- Server Management operations will comprise of the following –
- Monitoring of software licenses and identification of software license procurement or up-gradation
- Providing and maintaining user access controls – creation, modification or deletion of access/authentication and administrative rights on servers as per defined access policy.
- Maintaining data access security
- Deployment, Monitoring and updating of Anti-virus software on servers
- Coordinating with Anti-virus service provider for support for virus attacks and resolution.

The bidders will provide the backup frequency and recovery plan. A combination of full (on Tape Media) and incremental (Day-time) backups should be employed to ensure disaster tolerance. The bidder MUST provide an Industry Standard BCP/Disaster Recovery plan.

## **2 ELIGIBILITY CRITERIA**

The following are the conditions, which are to be necessarily fulfilled, to be eligible for evaluation of the proposed solution. Only those interested bidders who satisfy the following eligibility criteria should respond to this Tender:

1. The hardware and facility management offered must be of high quality and manufactured by nationally / internationally reputed manufacturer having a minimum turnover of Rs.500 Crore (Attach copy of the audited balance sheet) and ISO 9001 (Services and Manufacturing) and ISO 14001 certifications.
2. In case of the representative/ dealer, the representative/dealer must attach tender specific authorization letter (in the enclosed format in the tender form) from respective OEM and service provider (facility Management) for all the products and service quoted by him.
3. In case of dealer the bidder must be an ISO 9001 certified incorporated company and must have a minimum turnover of Rs. 3 crores, for the year ending 2008 or 2009 or 2010. Attach copy of the audited balance sheet.
4. The Bidder must have working office and service center in the state of Madhya Pradesh for at least three years (attach copy of MPST / CST / TIN and Service Tax Registration issued by M.P.
5. The Bidder/ Service provider should be in the business of executing/implementing hosting / monitoring & management services for at least last three years. Hosting / monitoring & management services built for self services will not be considered for qualifying criteria.
6. The Bidder / service provider should have executed at least five hosting / monitoring & management services within India.

7. Bidder / Service provider Should have a SMC (Service Management Centre) in India with a toll free number for providing help desk facility( SPOC- Single point of Contact)
8. The Bidder/ Service provider should have obtained ISO/IEC 27001 certifications in Information Security Management Services.
9. Bidder or Service providers Workforce Should be ITIL Compliant / Certified
10. There should be alternate command centre which should not be at the same premises at the monitoring site.

Bidder has to provide authorization of service provider for this Bid.

Note: - The Bidders should submit the documentary proof and information in support of each of the criteria listed above. If desired Madhya Pradesh Electronic Development Corporation Ltd would carry out inspection of the development centre to assess the capacity. Bidders not meeting the above criterion shall out rightly be rejected and their financial bid shall not be opened.

### **3 INSTRUCTIONS TO BIDDERS**

#### **a. Amendments To Tender**

Any changes, additions or deletions in the tender will be available on the website [www.mpsedc.com](http://www.mpsedc.com). No written communication will be circulated.

#### **b. Tender Evaluation & Contract Award**

Any changes, additions or deletions in the tender will be available on the website issued by the Additional Chief General Manager, MPSEDC, Bhopal. No written communication will be circulated.

#### **c. Sealing and Marking of Bids**

The bidders shall submit EMD, technical bid (containing the technical specifications offered, literature leaflets etc and the technical and commercial deviation if any) and one original copy of commercial bid in separate, envelopes should be sealed in one main envelope. All the envelopes should be distinctly marked EMD, technical bid, and commercial bid.

The bid will consist of the following:

- i. The bidder should have service support network in Madhya Pradesh for after sales services. (Details of which to be submitted along with the bid).
- ii. Technical deviations if any, from the terms, conditions and specifications as specified in the bid document.
- iii. Bid form duly filled in, signed and complete in all respects
- iv. The price should be firm, inclusive of all taxes and local levies if any. On FOR destination basis.

- v. The rates should be free from all escalation. However, all Tax and duty benefits if applicable should be passed on to us.
- vi. The inner and outer envelopes shall be addressed to the competent authority at the following address:  
THE Additional Chief General Manager (P)  
M.P. STATE ELECTRONICS DEVELOPMENT CORPORATION LTD.  
147, Zone-I, Maharana Pratap Nagar, BHOPAL-462011
- vii. The inner envelopes shall also indicate the name and address of the Bidder to enable the bid to be returned unopened in case it is declared "late."
- viii. If the outer envelope is not sealed and marked, the competent authority will assume no responsibility for the bids, misplacement or premature opening.
- ix. Telex; cable facsimile or fax bids will be rejected.
- x. Conditional bids are liable to be rejected.

#### **d. Deadline for Submission of Bid**

Bids must reach to the competent authority at the address specified but not later than the time and date specified in the invitation of Bids. In the event of the specified date for the submission of bids being declared a holiday for the office of the competent authority, the bids will be received up to the appointed time on the next working day.

#### **e. Late Bid**

Any bid received after the deadline for submission of bids prescribed by the competent authority, will not be accepted and returned unopened to the bidder.

#### **f. Modifications and Withdrawal of Bid**

The bidder may modify or withdraw its bid after bid's submission, provided that written notice of the modification or withdrawal is received by the competent authority prior to the deadline prescribed for submission of bids.

#### **g. Bid Process**

- i. Opening of Bids

Since it is a Two-bid system, Technical and EMD envelope will be opened first by the Committee constituted for this purpose. If the technical bid specifications offered, EMD and deviations asked (if any) are found in order, the Committee will open commercial bid only for the eligible bidders.

The Committee will open the bids, in the presence of Bidders' representatives who choose to attend on the date specified at the following location:

Addl. CGM (P)  
M.P. STATE ELECTRONICS DEVELOPMENT CORPORATION LTD.  
147, Zone-I, Maharana Pratap Nagar, BHOPAL-462011

Prospective Bidder representatives shall sign a register evidencing their attendance. In the event of the specified date of Bid opening being declared a holiday for the office the Competent Authority, the bids shall be opened at the specified time and location on the next working day.

In case, the commercial bid is not opened on the same or next day of opening of technical bid the Committee may decide to open the commercial bid on subsequent dates. In such case the date, time and place of opening of commercial bid will be intimated to the bidders or their representatives.

Attach below is a diagram that represents the way the entire bidding process will take place.

## **ii. Preliminary Examination**

Before starting evaluation, the bids will be examined to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the bids are generally in order. In case of computational error the basic price will prevail. In case of error in totals and grand total, the sub total will prevail.

If bid is determined as not substantially responsive, the competent authority will reject it and only the substantially responsive commercial bids will be considered.

The process of evaluation of commercial bid is as follows:

- The Committee, appointed by the Corporation, will first verify that the Bank Draft for Bid Security is in order and as per requirement of the bid. The Committee will examine the bid on Eligibility Criteria as specified. The scrutiny of technical proposals will be based on the Evaluation Criteria determined.
- The Commercial bid will be opened only for the proposals, which are found eligible and technically acceptable by the Committee and approved. On the day specification for the opening of bid, the Committee, appointed by the Corporation, will open the commercial bids of eligible bidders and scrutinize the same minutely.
- The bidder is required to quote for all the items mentioned in price schedule. Therefore any bid, which does not indicate price for all the items, and any item have been left blank, it will be considered that the cost of item has been included in the other items and the total of the price quoted include for all the required items. In case complete product is left blank it will be considered as non-responsive bid and thus liable for rejection.
- After scrutiny, the Corporation after having examined the proposal may accept the same or accept the bid price of any other bidder found suitable or reject all or any proposal. The decision of the Corporation in this regard shall be final and binding.
- The corporation reserves the right to negotiate the prices with bidder/ bidders.
- The quantity mentioned in the tender document is as per our estimate only however, Corporation reserves the right to place order for the less/higher quantity or segregated delivery schedule depending on the actual requirement.
- Commercial bid will be evaluated on the basis of NPV ( Net present value) of both options : One time purchase (Financial bid-A) and Built, own, Operate Model (Opex) (Financial bid-B).
- Annexure C is optional item and required as per the demand of the project therefore annexure C shall not be taken in to account for the evaluation of the financial bid.

## **Rejection of Bids**

The Competent Authority reserves the right to reject bids which are non responsive, including without limitation, bids which contain or involve the following:

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- i. Late or incomplete Tenders
- ii. Failure to conform to the rules or requirements contained in the Tender
- iii. Failure to sign the Tender as an authorized representative
- iv. Proof of collusion among bidders, in which case all Tenders involved in the collusive action will be rejected
- v. Non compliance with applicable law, unauthorized additions or deletions, conditional bids, incomplete bids or irregularities of any kind which may tend to make the bid incomplete, indefinite or ambiguous as to its meaning.
- vi. Any exclusion of requirement within the Tender.

#### **h. Contacting the Competent Authority**

No Bidder shall contact on its own, the Competent Authority on any matter relating to its bid, from the time of the bid opening to the time the contract is awarded.

Any effort on part of a Bidder to influence the Competent Authority or members or Technical/Monitoring committee, in its decisions on bid evaluation; bid comparison or contact award may result in rejection of the bidder's bid.

#### **The Bid Security may be Forfeited**

If a Bidder withdraws its bid during the period of bid validity specified by the bidder on the bid Form or In case of a successful Bidder, if the Bidder fails:

- i. To accept the order
- ii. To furnish performance security
- iii. If the Vendor, after accepting the purchase order fails to deliver the material/services as per the order.

#### **i. Bid Price**

- i. The bidders shall indicate on the prescribed Price Schedule, including item-wise and final Bid Price of the items listed
- ii. Prices quoted by the Bidder shall be fixed during the Bidder's performance of the contract and shall not be subject to variation on any account.
- iii. A bid submitted with an adjustable price will be treated as non-responsive and rejected.

## **Terms and Conditions**

### **1. Performance Security:**

The project will carry a performance guarantee for three year. This guarantee may be invoked on violation of any of the condition (s) given below:

If any of hardware or services, which shall be given by you, does not perform satisfactorily

The observed output/deliverables of the project is not in accordance with the approved specification.

The security system is not foolproof, with unauthorized person being able to access/infiltrate into the system.

The corporation suffers losses by way of some of the module generating illegal/ incorrect reports/output.

In order to take care of the concerns outlined above, the tenderer is required to furnish Performance Guarantee worth of 20% of the value of project, valid up to a period of three years. Performance security should be submitted within 15 days of receiving the work order. The Performance Security can be in the form of Bank Guarantee or FDR Pledged in favour of MPSEDC Ltd., Bhopal

**2. Project Time line and Payment Milestone:** Total period for Supply, Installation and Commissioning of Servers, SAN and other hardware components at Data Centre will be 90 days.

### **3. Payment**

#### **For on One Time Purchase Model**

**Payment** shall be released by MPSEDC as per the following terms:

For annexure A of commercial bid, Payment for 90% of the value of Hardware supplied shall be released against proof of delivery of consignment on submission of bills in triplicate. Balance 10% of the value of the Hardware supplied shall be released on successful installation. The payment for facility management shall be released in 12 Quarterly instalments after completion of each quarter.

or

For annexure B of commercial bid, the payment shall be released in 12 Quarterly instalments against proof of satisfactory performance of material and Services (hardware and facility management).

The bills for the purpose of release shall be submitted to MPSEDC, Bhopal. Interest on delayed payment shall not be payable.

#### **For on Built, own, operate ( OPEX) Model**

Payment shall be released by MPSEDC as per the following terms:

All Standard software - 100% payment shall be released on license delivery and acceptance.

For hardware and services payment will released Quarterly in advance for 12 quarters. Payment period will start after successful implementation.

Ownership of Hardware : Ownership of all hardware will remain with bidder during contract period. After contract period all hardware shall be transferred to MPSEDC ownership of MPSEDC if desired by MPSEDC. Bidder has to specify transfer price of all hardware in commercial bid.

4. Installation Verification & Quality Check: Checking will be conducted by the officer/agency appointed by the Competent Authority.

### **5. Penalty**

- i. Delay in time line – A delay in supply, installation & commissioning of Hardware & Software would invite a penalty of 0.5 % of the hardware & software cost per week. A delay of more than 4 weeks may result in cancellation of contract & forfeiture of Performance Guarantee.
- ii. Non performance of Facility management Services – The penalty for downtime for Facility management Services shall be 5 % of the facility management charges for a downtime time of every 0.5 % (or part) beyond the permissible limits (i.e. 0.5 % % during PBH and 1 % during Non PBH). Downtime will be calculated on Quarterly basis. The downtime during Non PBH shall be calculated as half of the actual downtime. For example a downtime of 2 hours during Non PBH shall be considered as 1 hour. If the uptime falls below 95 % may result in cancellation of contract & forfeiture of Performance Guarantee.

## 5. GENERAL INFORMATION AND EMD DETAILS

1	EMD Details DD No and date: Amount in Rs. Name of the Bank:	
2	Name and Address of the Tenderer:	
3	Contacts:	
4	Telephones:	
5	Fax:	
6	E-mail:	
7	Mobile No:	
8	Category of the tenderer (Whether company, partnership firm or Proprietary concern)	
9	Name of Chief Executive Officer and Telephone No.	
10	Year of Establishment	
11	Sales Tax/Commercial Tax/ CST nos.	
12	Income Tax PAN/GIR No.	
13	Yearly Turn over of the Last 2 years.	
14	Name and Address of the Banker	
15	List of major Clients and the size of orders executed	

Note: Separate sheets may be attached wherever necessary.

Signature of the Tenderer  
With stamp and date

## Letter for Submission of tender

The  
MPSEDC  
Bhopal,  
Madhya Pradesh  
Reference. Tender No. ....Dated.....

Sir,

Having examined the tender document relating to the Selection of Vendor for Supply, Installation and Maintenance of Servers, SAN and other hardware components with Managed Continuity services at Data Centre for Election Commission of India, Bhopal as detailed in your tender, Conditions and Scope of Work etc, and having understood the provision & requirement relating to the preparation and all other factors governing the tender , We hereby submit our offer to carry out the Selection of Vendor for Supply, Installation and Maintenance of Servers, SAN and other hardware components with Managed Continuity services at Data Centre for Election Commission of India, Bhopal in accordance with the terms & conditions and confirm our acceptance to execute the order within the time period specified in the tender document, at the rates quoted by us in the accompanying Technical & Commercial bid.

If after the tender document is accepted, we fail to complete the Selection of Vendor for Supply, Installation and Maintenance of Servers, SAN and other hardware components with Managed Continuity services at Data Centre for Election Commission of India, Bhopal project as per the order, we agree that, MPSEDC Ltd, Bhopal shall have full authority to forfeit the earnest money and cancel our order with no obligation on their part.

We further confirm that,

1. We have successfully executed orders of similar nature and have sufficient experience & financial strength in handling orders of this value.
2. We have sufficient qualified manpower & necessary materials to execute the order efficiently in the specified time schedule. The quoted rates shall be valid till the completion of the order.
3. We further confirm that all chapters of the tender have been read & understood & signed & there is no deviation/discrepancy.

We do hereby undertake, that, until a formal contract is prepared and executed, this bid, together with your written acceptance thereof or placement of letter of intent awarding the contract, shall constitute a binding contract between us.

We confirm that we have not been blacklisted by any Government/ Government organization in India.

The information given along with the Bid is true and we understand that if the information provided by us is found to be wrong at any point of time during the Bid Process or Contract period our Bid/Contract may be cancelled and the Bid Security/Performance Guarantee may be forfeited.

Signature of the Tenderer  
With stamp and date

**Annexure - Manufacturers Authorization Form**

Ref No: .....

Dated: .....

To,  
The Additional Chief General Manager  
M.P. State Electronics Development Corporation Limited  
147, Zone-I, Maharana Pratap Nagar, Bhopal-462011

Tender No:..... Due Date: .....

Dear Sir,

We \_\_\_\_\_ who are established and reputed Manufacturers  
of \_\_\_\_\_ having \_\_\_\_\_ factories at \_\_\_\_\_  
\_\_\_\_\_ (address of the  
factory) do hereby authorize M/s \_\_\_\_\_ (Name &  
Address of the Bidder) to submit a bid, and subsequently negotiate and sign the contract with  
you against the above tender.

We hereby extend our full guarantee, warranty and support and also in meeting warranty  
obligations by providing necessary spares in time for the goods & services offered by the  
above firm against this tender, as per standard as well as MPSEDC warranty terms.

Yours faithfully

(Name)  
(Name of the manufacturer)

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

## Technical Specifications

Note: Bidder has to provide the following items as required.

### 1. Server

#### Specifications Required

- **Form Factor:** 1U/2U
- **CPU:** 2 x quad-Core Intel® Xeon® Processor E5620 (2.40 GHz), integrated with 12MB Cache.
- **Memory:** 16GB of RAM required scalable upto 192GB or higher, Maximum 50 % of the memory slots should be populated with the offered RAM.
- **Hard Disk Drives:** 2\*146 GB, 10K RPM, 2.5" Form Factor Hot Swappable Hard Disk Drives. Should support minimum 6 HS HDD.
- **Optical Drive:** DVD ROM drive
- **Ethernet Connectivity:** Total Four (4) Gigabit Ethernet dual Ports, should be TOE enabled
- **Ports:** 4 USB 2.0 Ports, one RJ-45 Port, 1 Video Port, 1 Serial Port.
- **Cooling fans:** Minimum Four fans / multi speed / Hot swap and redundant/ fan failure signals front panel alarm LED.
- **Diagnostics / Security:** Pre-failure Alerts for processors, memory, HDDs, plus system temperature. Should detect impending failure of supported components (processors, memory, and hard disk drives) *before* actual failure, and alert the administrator / Power-on password / administrator password / unattended boot / selectable boot / unattended start mode
- **PCI Slots:** Minimum 2 free 2 PCI-e/PCI-x slots for future expandability.
- **Power Supply:** Hot Swappable and Redundant power supply is required.
- 4 Gbps dual port HBA card
- **Systems Management:** Should support highly secure remote system power control using data encryption. This should allow an administrator to restart a server without having to visit it in person, saving travel time and getting the server back up and running quickly and securely. Systems Management Software to be provided with the server. The systems management software should be capable of:
  - Discovering virtual and physical systems and related resources.
  - Providing health status, alerts and monitors of system resources.
  - Notifying downloads and installs updates for systems.
  - Providing a remote console, a command line and file transfer features to target systems.

- **Server Certifications:** UL, FCC, ROHS

## 2. Storage Area Network-SAN

<b>Feature</b>	<b>Requirement</b>
<b>Capacity</b>	The Storage Array shall be offered with 5 TB useable space on Raid 5_ using 16 x 450 GB 15K rpm 4Gbps FC disks with 2 Hot Spare. All should be in one array
	Should be expandable to atleast 90 or hard disks in the same storage system and with the same proposed base controller pair
<b>Availability</b>	No Single Point of Failure system
	Should offer dual active controllers
	Should offer redundant power supplies and cooling units
	Should support RAID 0,1,5,10/6
	Cache should be mirrored, battery backed. Battery backup should last at least for 72 hours. If battery backup is not there, then cache destaging should be offered.
	Should support global hot spares
	Should support multiple paths from server to SAN. Software required for this should be supplied.
	Should support automatic failover in case of failure of one controller occurs
<b>Performance</b>	Each controller should support at least 1 GB of cache.
	Each controller should have atleast two nos of 8 or 4 Gbps host ports
	Each controller should have atleast 2 Nos of drive ports, each 4Gbps, for connecting to disk enclosures.
	Should have a Cache IOPS rating higher than 140000
<b>Management</b>	
	The Management Software should support the following features: <ul style="list-style-type: none"> <li>▪ Online capacity expansion</li> <li>▪ Increasing capacity of existing logical drives online</li> <li>▪ Online changing of RAID configuration of an array</li> <li>▪ Changing data stripe online</li> <li>▪ Diagnostic tools for subsystem components (controllers, disks, etc.), recovery, system and RAID manager error logs</li> <li>▪ Should support LUN Masking</li> </ul>
	Should be capable of point in time copy functionality as an option
	Multipathing drivers should be provided
	It should be possible for disks to be moved from one enclosure to other without affecting the RAID group/Set.
<b>Remote Replication</b>	The storage array should be capable of synchronous and asynchronous replication. There should be capability to switch between synchronous and asynchronous modes without any downtime and on the fly.
<b>Warranty</b>	Hardware and all associated software should be quoted with 3 years onsite warranty, 24x7 support.
<b>OS Support</b>	The disk system should be capable of supporting Windows NT/2000/2003, Linux, AIX, HP-UX and Solaris operating system.

### 3. Tape Library

- Automated tape library (ATL) system LTO-4 (1 drive) with all accessory with 24 slots.
- Tape Library shall provide web based remote monitoring capability.
- The Tape Library unit shall be configured with FC LTO Gen4 Tape Drives.
- Tape Drive Architecture in the Library shall conform to Ultra3 SCSI standards.
- Offered LTO4 drive in the Library shall conform to the Continuous and Data rate matching technique for higher reliability.
- Offered LTO4 drive in the library shall offer optional WORM support and embedded AES 256 bit Encryption support.
- Offered LTO4 drive shall have native speed of 120MB/sec and a compressed speed of 240 MB/sec for 2:1 compression.
- Tape Library shall provide Fiber connectivity to SAN Environment.
- For optimal Performance. Tape Library shall provide 4Gbps Native FC interface connectivity to SAN switches.
- Tape Library shall be offered with minimum of 24 slots and barcode reader.
- Tape library shall support removable magazine and mail slot.
- 25 nos of LTO-4 tapes to be provided with the tape library with bar code lable and head cleaning tape.
- 

**Note : All Server , Storage and Tape Library should be from same make.**

### 4. SAN Switch

For connectivity of Servers, SAN and Tape Library, 4Gbps Fiber channel SAN Switches with adequate number of active ports should be provided. SAN Switch should be scalable to minimum 16 ports & relevant S/w with Licenses for integration of Servers with Storage

### 5. Backup Software

1	The proposed Backup server Solution shall be available on 64 bit OS platforms and shall have the capability to support for all major Operating systems.
2	Backup software shall support and configured Scheduled automated restores to perform periodic restore drills.
3	The backup software must provide near real time monitoring and reporting of the backup environment. It should provide a graphical representation and monitoring of trends and current status.
4	Software shall support event notification to notify backup administrator about events like Job Failed or Job aborted etc
5	Backup software shall Provide LAN FREE backup of servers in SAN environments.-- <b>2 nos of client license</b>
6	Software shall offer centralized management console to remotely monitor backups
7	Software shall support Raw device backup of Windows/Linux/UNIX based system
8	Ability to perform "Hot-Online" backup for different type of Databases such as Oracle, MS SQL, DB2 etc. on various platforms. Also supports the SAP DB backup/restore on heterogeneous platform <b>2 nos SQL APM license</b>
9	The backup software must be capable of supporting online backup of MS

	Exchange & Lotus Domino mailing systems
10	The Backup software must have an integrated RDBMS as the catalog and must not use Flat file system to store the backup data. This must be grow dynamically / automatically based on the requirement
11	The backup software should have capability to configure automated backups with customized frequency based scheduling based on the backup policy. In addition the software should also have capability for user-initiated backup
12	The Backup Software shall provide LAN & SAN based data backup and should be able to collocate the data on to separate set of tapes as per the system or group of systems
13	The Backup Software shall provide web / Java based client interface, which can be accessed from any location
14	The software should support for ever incremental backup & there should not be a need to do a Full backup again.
15	The backup software must be licensed to use disk, LTO Tape libraries and Virtual Tape Libraries for backups via SAN or through NDMP.
16	Should have the ability to retroactively update changes to data management policies that will then be applied to the data that is already being backed up or archived
17	The proposed backup software must support electronic vaulting to avoid the tape medias to be sent offsite. Bidder must quote this functionality if additional lic is required

## 6. Switch for Data Centre

Features	Specifications Required
Interface /Slots	24 ports 10 / 100/ 1000
VLAN features	IEEE 802.1Q VLAN encapsulation
	Dynamic Trunking Protocol (DTP) or equivalent
	Minimum 255 VLAN
Management	RS-232 Console port
	Accessibility using Telnet, SSH, Console access.
	SNMPv1, snmpv2/v3
Standards	IEEE 802.1x support
	IEEE 802.3x full duplex on 10BASE-T and 100BASE-TX ports
	IEEE 802.1d Spanning-Tree Protocol
Power Supply	Internal power supply 230 Volt 50Hz input
Miscellaneous	All necessary power cords, adapters, data cables, connectors, CDs, manuals, brackets accessories, wire managers, etc. should be provided

## 7. 42U Rack

- 19" 42U racks shall be used in the Data Centre for hosting the department applications of Government of Madhya Pradesh. All the racks should be mounted on the floor with castor wheels with brakes (set of 4 per rack)
- Floor Standing Server Rack - 42U with Heavy Duty Extruded Aluminum Frame for rigidity. Top cover with FHU provision. Top & Bottom cover with cable entry gland

plates. Heavy Duty Top and Bottom frame of MS. Two pairs of 19" mounting angles with 'U' marking. Depth support channels - 3 pairs. with an overall weight carrying Capacity of 500Kgs.

- The racks should conform to EIA-310 Standard for Cabinets, Racks, Panels and Associated Equipment and accommodate industry standard 19" rack mount equipment.
- Cabinets shall have a provision for baying so as to suitable for both network & server applications.
- Front and Back doors should be perforated with at least 70% or higher perforations
- Dual hinged front and quad hinged rear doors open from either left or right and are easily removable.
- Cabinets shall have provision to mount patch panels vertically between bayed position of the cabinets using vertical sliding bracket
- All racks should be OEM racks with Adjustable mounting depth, Multi-operator component compatibility, Numbered U positions, Powder coat paint finish and Protective grounding provisions.
- All racks should have mounting hardware 2 Packs, Blanking Panel (1) varying from 4 U to 5 U size.
- Keyboard Tray with BB Slides (Rotary Type) (1 no. per Rack)
- Stationery Shelf 627mm Network (2 sets per Rack)
- All racks must be lockable on all sides with unique key for each rack
- Racks should be compatible with floor-throw as well as top-throw data centre cooling systems.
- Server Racks should have the following things in addition to the above mentioned hardware
  - PS/2 Interface adapter
  - USB Interface adapter
- Racks should have Sliding vertical patch panel, vertical cable management finger, vertical cable management tray, and sliding vertical bracket to mount patch panels.
- Wire managers
  - Two vertical and four horizontal
- Power distribution Unit
  - Power Distribution Unit - Vertically Mounted, 32AMPs with 25 Power Outputs. (20 Power outs of IEC 320 C13 Sockets & 5 Power outs of 5/13 Amp Sockets), Electronically controlled circuits for Surge & Spike protection, LED readout for the total current being drawn from the channel, 32AMPS MCB, 5 KVA isolated input to Ground & Output to Ground (1 No per Rack)
- Door
  - The racks must have steel (solid / grill / mesh) front / rear doors and side panels. Racks should NOT have glass doors / panels.
  - Both front and rear doors must have the ability to open from the left and right without the need for any field modifications or tools
- Fan trays
  - Fan 90CFM 230V AC, 4" dia (4 Nos. per Rack)

- Fan Housing Unit 4 Fan Position (Top Mounted) (1 no. per Rack) - Monitored - Thermostat based - The Fans should switch on based on the Temperature within the rack. The temperature setting should be factory settable. This unit should also include - humidity & temperature sensor
- Depth
  - 1000 mm

## **8. Server load Balancer**

### **Architecture**

Should have be purpose built architecture with multi core cpu.

Should have 6 x 10/100/1000 Mbps copper ports +2x 1000 BASE SX ports

Should have minimum 2GB RAM

should support minimum 5M Simultaneous Sessions

Should provide minimum 200 Mbps L7 throughput and should have an option to upgrade upto 4 Gbps with license upgradable

Should support Dynamic routing protocols like OSPF, RIP1, RIP2

Should support minimum 500 SSL CPS and can be upgradeable to 5000 SSL CPS with license upgrade

Should support minimum 100 Mbps compression scalable to 1 Gbps

### **Load Balancing Features**

Should have minimum support for 3000 servers

Should support load balancing algorithms

Least amount of Bytes

Least number of users/session.

Cyclic.

weighted Cyclic

SNMP Parameters, like Server CPU utilization etc

Should support Client NAT & Server NAT

In case of Server / Application failure device should detect it in not more than 30 seconds

In case of Server failure traffic should be diverted to another Server automatically

### **Server Management Feature**

Should support Graceful shutdown of Servers

Should support Graceful Activation of Servers

Should able to redirect traffic based on Source IP, Destination IP & TCP PORT

Segmentation : Ability to divide single box in to multiple boxes & operate as independently So single device can be used to load balance multiple DMZ servers without compromising network security

### **Health Monitoring**

Should provide individual health check for each Server & Application

Should be able to do health check on protocols like HTTP, SMTP, POP etc

Should able to check the health of Server OS, Application & contents as well

Should provide AND , OR mechanism between health check

Should provide GUI interface to configure any health check

### **Support for Bandwidth Management support for future requirement**

Should be upgradeable to support bandwidth management based on any L3-L7 information

Should be upgradeable to support CBQ, WRR, RED mechanism for BWM

Should be able to upgrade to provide Minimum & Maximum bandwidth allocation limit

Should be upgradeable to provide Two-Way bandwidth management

Should be upgradeable to support bandwidth borrowing between 2 policies

Should be upgradeable to limit P2P bandwidth & protocol like Kazaa, Bit-Torrent, Ed on key etc

### **Support for Application Security & Intrusion Prevention support for future requirement**

Should able to provide protection against 2000 known worms & viruses like nimda, welchia, slammer, mydoom etc.

IPS Should support 24/7 Security Update Service

Should provide Syn Flood Protection, DOS / DDOS etc

Should perform URL & content based Filtering, custom categories, URL redirection, Keyword search blocking

Device should perform Antivirus detection & protection at Network gateway. Management console for Real Time Monitoring

Bi-directional Antivirus Protection

Disruption Free Database Update, Spy ware protection, OS based attack protection

IPS Should support Real Time signature update

IPS Should support Provision to add static own attack signatures

System should show real-time & History reports of Bandwidth usage per policy.

### **Device Management & Reporting**

Should provide GUI interface for configuration & reporting

Should provide HTTP / HTTPS interface management

Should provide SSH / Telnet / CLI interface

Should support SNMP V1, V2c, V3

Should provide Detailed LIVE reporting for traffic on each server / Farm

Should provide detailed historic reporting for each server / farm traffic

### **9. Printer:-**

Print Speed -Normal Quality	Up to 32 ppm A4 Size
First page out	Less then 12 Second
Print resolution	Up to 1200 x 1200 dpi
Standard Media Sizes	A3, A4, legal, letter, Monarch, postcard (JIS), DPostcard (JIS), RA3, statement, 8.5" x 13", 11" x 17 "
Duplex Print Options	Automatic
Memory	Minimum 120 MB Expandable upto 500 MB
Standard Printer Languages	PCL 6, PCL 5e, Postscript Level 3 emulation
Duty Cycle	Up to 60000 pages per month
Media Types supported	Paper (plain, preprinted, letterhead, prepunched, bond, recycled, colour, rough, toughpaper), transparencies, labels, envelopes, cardstock, vellum
Standard connectivity	Hi-Speed USB 2.0 port, IEEE-1284 parallel port, Fast Ethernet embedded print server
Compatible Operating Systems	Microsoft® Windows® 2000, XP Home, XP Professional, Server 2003; Certified for Windows Vista™; Mac OS X v 10.2.8; Mac OS X v 10.3; Mac OS X v 10.4 or higher
Mac Compatibility	Yes
Power consumption (active)	up to 650 watts
Power consumption, power save	Less then 8 watts
Energy Star certified	Yes

**Annexure A – Financial Bid for one time purchase model**

SI No	Component	Qty	Rate per unit	Amount (inclusive of taxes and three year warranty)
1	Server	6		
2	Storage Area Network (SAN)	1		
3	16 ports 4 Gbps FC SAN switch	2		
4	Tape Library LTO-4	1		
5	Backup Software	1		
6	LAN (Ethernet) Switches for DC	2		
7	8 port KVM Switch	1		
8	KVM-1 U rack mountable KVM with necessary cable	1		
9	42-U Rack	1		
10	FC cable 15 mts	20		
11	Window server 2008 R2 Ent. Edition	6		
12	SQL server 2008 Ent. Edition R2 OLP	2		
13	SQL server 2008 Ent. Edition 100 user CAL	100		
14	A3 Size Laser Printer duplex with networking	1		
15	RJ-45 connector	50		
16	CAT 6 UTP cable bundle	1		
17	Total Cost of Hardware & software (1 to 16)			
18	Facility Management Services charges as per details specified in scope of work as a percentage of total Hardware & software cost per quarter. (Three Months)	% of SI No 17 per Quarter (12 Qrts)		
Total bid cost				

**Note: The Facility Management cost to be quoted should be Minimum 3% of the Hardware & Software cost (i.e. 3% of Item No 17). The Bids of any bidder quoting less than 3% shall be rejected.**

	<b>Items</b>	<b>Qty</b>	<b>Rate</b>	<b>Amount</b> (inclusive of taxes and three year warranty)
<b>Annexure B – Financial Bid (On Built, Own, Operate Model ) (opex)</b>				
1.	One time Charges for software Licenses as mentioned in annexure A			
2.	Quarterly Recurring Charges for 3 years			
	<b>Total (In Figures)</b>			
	<b>Total ( In Words)</b>			

#### **Annexure C**

<b>Particulars</b>	<b>Qty</b>	<b>Rate per unit</b>	<b>Amount</b> (inclusive of taxes and three year warranty)
Additional charges for 4GB RAM	3		
Additional Charges for CPU	3		
Server Load balancer	1		
Transfer prices of all hardware to MPSEDC ownership after contract period.			

-The quantity of hardware may be changed as per requirement. Payment shall be made as per actual quantity installed. Charges for facility management shall be calculated accordingly.

-Initially order shall be issued for one year. If the performance during this period is satisfactory then order shall be extended for additional two years.

-Annexure C is the optional item which may required as per the demand of the project therefore annexure C shall not be taken in to account for the evaluation of the financial bid.

We further confirm our acceptance to the terms & conditions of the tender document.

Signature and Seal of Bidder