

## Corrigendum 4

### Tender for Supply, Installation & Maintenance of Servers/SAN and other Hardware Components for Data Centre under e-District Project

#### Tender No. MPSEDC/MKT/2009/171

| Company Name             | SN       | RFP Reference                     | RFP Description  | Clarifications Asked  | Response  |
|--------------------------|----------|-----------------------------------|--|---|---|
| <b>General amendment</b> | <b>1</b> | Item 9, Page 29                   | Disk to Disk Backup  |   | The Disk to Disk backup is not required at this point of time and is removed.   |
| <b>HP</b>                | <b>2</b> | Page No. 24(Memory)               | Should support Advanced memory protection technologies like AECC,memory mirroring and memory lockstep mode.        | We request you to kindly change it to: "Memory protection should for Advanced Memory Fault Tolerance for the Memory DIMMs" which can be Memory lockstep mode/Chip Kill/Any other equivalent technology  | This should be read as "Memory protection should for Advanced Memory Fault Tolerance for the Memory DIMMs"  |
|                          | <b>3</b> | Page No. 26 (Management Software) | Should be able to move, add, or change server network connections on the fly                                       | Request you to kindly remove this line as it will increase the cost of the project.   | This line is removed.   |
| <b>IBM</b>               | <b>4</b> | Page No. 24 FC Card               | Dual Port Fiber channel Mezzanine card to connect to shared storage  | Mezzanine is proprietary word.  | This should be read as "Dual Port Fiber channel Mezzanine/PCIe or equivalent card to connect to shared storage".                                    |
|                          | <b>5</b> | Page No 26 & 27                   | Cache shall be mirrored across both controllers using dedicated PCI-e bus instead of disk data path.               | Request to be replaced as "Cache shall be mirrored across both controllers" As usage of whatever paths is irrelevant as long as performance criteria are met.   | This should be read as " Cache shall be mirrored across both controllers"   |
|                          | <b>6</b> | Page No 26 & 27                   | The storage array should support incremental resynchronization between primary and snapshot/clone volume.          | Request that this clause be deleted as it is vendor specific.<br>Or To be changed to " Storage array should support the creation of point in time copies as well as full clones. It should be capable of at least 4 point in time copies per volume." | This line is modified as "The storage array should support cloning".  |
|                          | <b>7</b> | Page No 27                        | Support on various Platforms including TRU64 UNIX, HP-UX, Linux, Open VMS, Netware and Windows                     | TRU64 Unix has already been declared End of sales in 2007. We support the operating systems which are supported by the respective OEM's, Hence request to remove Tru64 Support  | TRU 64 is removed.  |
|                          | <b>8</b> | Page No 28                        | The solution shall provide with the unlimited or at-least 100 licenses for Bare Metal restore for windows servers. | No of licenses should be for required no of servers. Request to replace with "The Solution shall provide with Bare metal Licenses for all Proposed Windows Servers"   | This is modified as " Number of licenses required is 20 for Bare Metal restore for windows servers"   |
|                          | <b>9</b> | Page No. 24 Expansion Slot        | Should have a minimum of 2 PCIe based mezzanine slot and simultaneously host interconnects of Ethernet.FC fabrics. | Mezzanine is proprietary word.  | This should be read as "Should have a minimum of 2 mezzanine/PCIe or equivalent slot and simultaneously host interconnects of Ethernet.FC fabrics." |

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| <b>MCPL</b> | <b>10</b> | Chassis on Page 25 ( Blade Chassis Specifications)         | Same enclosure should support Intel Xeon/AMD Opteron/RISC/EPIC based blades  | It is understood for any of the support and not all. As in this case Intel Support will predominant and Proprietary support like RISC, EPIC should not be mandatory.  | Technical requirement no change. However bidder may propose equivalent or better solution.                                     |
|             | <b>11</b> | Chassis on Page 25 ( Blade Chassis Specifications)         | Same enclosure should support server, storage and expansion blades to enable consolidation of hardware   | When We are purchasing SAN Switches and storage as entirely separate unit , there is no point of having support for Storage in same Chassis.  | Technical requirement no change. However bidder may propose equivalent or better solution.                                     |
|             | <b>12</b> | Ethernet Switch on Page 25 ( Blade Chassis Specifications) | 2 No.s 10G Ethernet Switching Modules to be provided in redundant configuration for Connecting to all the blade servers to external Switch. Configuration should help minimize the Ethernet Cables | We suggest to include Both Redundant Gigabit(10/100/1000) Switches and Redundant 10G Switches.  | Technical requirement no change. However bidder may propose equivalent or better solution.                                     |
|             | <b>13</b> | Power Modules on Page 25 ( Blade Chassis Specifications)   | The enclosure should be populated fully with suitable power supplies for the full capacity. Power supplies should support N+N or N+1 redundancy configuration, where N is greater than 1           | Power Supply should be N+N Redundancy and Not N+1 to achieve complete redundancy.   | Technical requirement no change. However bidder may propose equivalent or better solution.                                     |
|             | <b>14</b> | Ethernet Switch on Page 24 ( Blade Server Specifications)  | Server to provide two 10G network ports for connectivity to Ethernet switch  | 1) Please include dual Gigabit Ethernet Ports also along with 10Gb Ethernet Card. This will help in connecting low speed resources  | Technical requirement no change. However bidder may propose equivalent or better solution.                                     |
|             | <b>15</b> | Page no 29(Router for Datacenter)                          | interface / Slots :BRI 1 port  | As per our understanding E-District DATA centre will be located in the BHOPAL and Remote districts will be connecting to the data centre either by Leased line or ISDN BRI.The core router at DATA centre should be asked with ISDN PRI port to support Remote district dialing in through ISDN BRI.Request you change the port asked to ISDN PRI instead of ISDN BRI | The router is removed.   |
|             | <b>16</b> | Page no 31   | Router Performance minimum 0.2mpps   | AS per the tender the interface required for the core routers is channelized STM which support 155 Mbps ,but the performance of the router asked is .2 MPPs which won't be sufficient to support the higher interface speed asked . Kindly increase the Router performance to minimum of 1 Mpps   | Since router is removed, this point is irrelevant.   |
|             | <b>17</b> | Page no 31   | Interface requirement  | Please clarify the interface requirement for the Core Router  | Since router is removed, this point is irrelevant.   |
|             | <b>18</b> | Page no 32 (DATA Centre Switch)                            | Switch for DATA centre interface 24 10/100 FE support  | As per the tender the port asked for the blade server are 10 G capability .Does the Switch should support 10 G port to the connect the Server .Kindly clarify the required port for the Switches  | 10G port is for SAN switch connectivity. However switch should have 1000 base TX for connecting 1 Gbps LAN port of the server. |

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| Acme Digitek Solutions (P) Ltd. | <b>19</b> | Page No. 25 (Pt. No. 4, Chassis)                  | The Blade Chassis should be configured with minimum 14 Nos. of Blades. Accordingly the No. of Chassis to be quote with interoperability   | The Blade Chassis should be able to support 8 Blades as the total no. of Servers are 8 nos  | No change in technical requirement. Additional slots are for future expansion   |
|                                 | <b>20</b> | Page No. 25 (Pt. No. 2&3, Server Type)            | Server Type II and Server Type III  | Mention the quantity for "Blade Type II" and "Blade Type III".  | Point no. 2 and 3 on Page 25 are removed.   |
|                                 | <b>21</b> | Page No. 25 (Pt. No. 5 SAN)                       | Storage box shall have more than 130,000 cache IOPS.  | The storage should support more than 130000 IOPS. As 130000 IOPS will require minimum 90 drives.  | This should be read as " The storage should support more than 130000 IOPS" and "Offered Array should have usable 5 TB capacities with RAID 5 protection on 146 GB FC drives and should be scalable to at-least minimum of 90 numbers of Drives "  |
|                                 | <b>22</b> |   | Clause No. 4 point no. (i)  | We are planning to start our operation in Bhopal. We do not have a full-Fledged set up there and we are operating through Associates. However we confirm that in case we get this order, we shall immediately have an office space with the local VAT registration and a support team. In View of above, we request you to kindly wave the clause No. 4 point (i) | If the vendor does not have an office in Bhopal, he should establish the same within One month of receiving work order.   |
|                                 | <b>23</b> | payment terms Point No. 2 of Terms and Conditions | Payment shall be released by MPSEDC as per the following terms: Payment for 80% of the value of goods supplied shall be released against proof of delivery of consignment on submission of bills in triplicate. Balance 20% shall be released in 12 Quarterly Installments along with payment of the Facility management charges. | Payment for 90% of the value of goods supplied shall be released against proof of delivery of consignment on submission of bills in triplicate. Balance 10% shall be released on successful installation. The payment for facility management shall be released in 12 Quarterly Installments after completion of each quarter.                                    | This should be read as "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 installments after completion of each quarter. |
| <b>Common Query</b>             | <b>24</b> | Page 32   | 8000 MAC Addresses support on switch  | We recommend that a support for at least 8000 MAC addresses is requested in the switch have capacity to store more mac address This way we can avoid broadcast of packet in all the ports when the mac-table gets filled with the less the Mac table due to less mac address support  | Technical requirement no change. However bidder may propose equivalent or better solution.  |
|                                 | <b>25</b> | Page 33   | Vlan 255 and Vlan id 4000   | We recommend the switch should support more VLANs and VLAN ids for more scalable and easy administration purpose  | Technical requirement no change. However bidder may propose equivalent or better solution.  |

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|  | <b>26</b> | Page 34 | Internal/External Redundant Power Supply on the switch  | We recommend this from a high availability perspective, at each of your remote locations.   | Technical requirement no change. However bidder may propose equivalent or better solution. |
|  | <b>27</b> | Page 35 | centralized VLAN management a requirement on the switches and Automatic negotiation of trunking protocol        | We recommend this as this reduces the overhead of creating / modifying / deleting VLANs in all the switches and in turn eliminating the configuration errors & troubleshooting.   | Technical requirement no change. However bidder may propose equivalent or better solution. |
|  | <b>28</b> | Page 36 | Support for Detection of Unidirectional Links   | We recommend support for Detection of Unidirectional Links and disabling them to avoid problems such as spanning-tree loops. We also recommend Spanning-tree root guard feature to prevent other edge switches in the network to become the root bridge.              | Technical requirement no change. However bidder may propose equivalent or better solution. |
|  | <b>29</b> | Page 37 | Should support LLDP and LLDP-MED  | We recommend that the switch should support LLDP and LLDP-MED including client location information. Should exchange link and device information in multivendor networks and have capability of identifying neighboring network devices on the network.               | Technical requirement no change. However bidder may propose equivalent or better solution. |
|  | <b>30</b> | Page 38 | IGMP snooping V3  | We recommend Switch to support IIGMPv3 snooping for IPv4 and MLD v1 and v2 Snooping for IPv6 provide fast client joins and leaves of multicast streams and limits bandwidth-intensive video traffic to only the requestors.   | Technical requirement no change. However bidder may propose equivalent or better solution. |
|  | <b>31</b> | Page 39 | switch to support DHCP server   | We recommend that the switch supports DHCP server enabling a convenient deployment option for the assignment of IP addresses in networks that do not have without a dedicated DHCP server.  | Technical requirement no change. However bidder may propose equivalent or better solution. |
|  | <b>32</b> | Page 40 | Switch Should support configuration rollback to replace current configuration with any saved configuration file | We recommend that the switch should support configuration rollback to replace current configuration with any saved configuration file.  | Technical requirement no change. However bidder may propose equivalent or better solution. |
|  | <b>33</b> | Page 41 | 802.1x  | We recommend that the switch should IEEE 802.1x to allow dynamic, port-based security, providing user authentication.   | Technical requirement no change. However bidder may propose equivalent or better solution. |
|  | <b>34</b> | Page 42 | DHCP snooping to allow administrators to ensure consistent mapping of IP to MAC addresses.                      | We recommend DHCP snooping to allow administrators to ensure consistent mapping of IP to MAC addresses. This can be used to prevent attacks that attempt to poison the DHCP binding database, and to rate limit the amount of DHCP traffic that enters a switch port. | Technical requirement no change. However bidder may propose equivalent or better solution. |
|  | <b>35</b> | Page 43 | Time-domain reflectometer (TDR)   | We recommend that the switch should support a Time-domain reflectometer (TDR) to diagnose and resolve cabling problems on copper ports.   | Technical requirement no change. However bidder may propose equivalent or better solution. |
|  | <b>36</b> | Page 44 | BPDU Guard feature  | We recommend the switch should support The Loop guard and bridge protocol data unit (BPDU) guard which provide Spanning Tree Protocol loop avoidance if unauthorized switch connected to port on the switch.  | Technical requirement no change. However bidder may propose equivalent or better solution. |

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|  | <b>37</b> | Page 45 | Layer 2 Traceroute  | We recommend the switch should support Layer 2 traceroute feature which allows the switch to identify the physical path that a packet takes from a source device to a destination device, This will help us during the time of troubleshooting | Technical requirement no change. However bidder may propose equivalent or better solution.  |
|  | <b>38</b> | Page 46 | Spanning-Tree Root Guard (STRG)   | We recommend the switch should support to prevent unauthorized edge devices not in the network administrator's control from becoming Spanning Tree Protocol root nodes   | Technical requirement no change. However bidder may propose equivalent or better solution.  |
|  | <b>39</b> | Page 11 | Installation and maintenance of E-District Application software   |  | Installation and maintenance of E-District Application software is removed. All other Facility Management/Maintenance works mentioned in the clause shall remain same.  |
|  | <b>40</b> | Page 18 | Performance Security "In order to take care of the concerns outlined above, the tenderer is required to furnish Performance Guarantee worth of 10% of the value of project, valid up to a period of three years. Performance security should be submitted within 7 days of receiving the work order." |  | This should be read as "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." |
| NOTE: Modified Price Bid Format (Annexure 8) is given below. The Tenderer should submit his Price Bid in the modified Price Bid Format |           |         |   |  |   |

## Annexure 8 – Details of Financial Rate

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.

| Sl. No. | Component   | Unit                      | Qty                 | Rate | Amount ( inclusive of taxes and three year Warranty) |
|---------|---|---------------------------|---------------------|------|--|
| 1       | Server  | Nos.                      | 8                   |      |  |
| 2       | SAN Storage   | Nos.                      | 1                   |      |  |
| 3       | SAN Switch  | Nos.                      | 2                   |      |  |
| 4       | Tape Library  | Nos.                      | 1                   |      |  |
| 5       | Switches for DC   | Nos.                      | 2                   |      |  |
| 6       | Firewall-Hardware   | Nos.                      | 1                   |      |  |
| 7       | 42-U Rack   | Nos.                      | 2                   |      |  |
| 8       | Backup Software   | Nos.                      | 1                   |      |  |
| 9       | Monitor 19" LCD for blade server console  | Nos.                      | 1                   |      |  |
| 10      | 42-U Rack   | Nos.                      | 2                   |      |  |
| 11      | UTP Cable (as required)   | LS                        | -                   |      |  |
| 12      | Jack Panel (as required)  | LS                        | -                   |      |  |
| 13      | PVC Pipe/ Casing Capping/ GI Pipe (as required)   | LS                        | -                   |      |  |
| 14      | IO, Patch Cord, Mounting Cords (as required)  | LS                        | -                   |      |  |
| 15      | Cabling (as required)   | LS                        | -                   |      |  |
| 16      | Additional RAM for the server specified In the tender in 4 GB Modules   | Per 4 GB modules          | 16 modules or 64 GB |      |  |
| 17      | Additional 146GB @ 15k rpm SAS hot pluggable HDD for the server specified In the tender   | Nos                       | 10                  |      |  |
| 18      | Additional processor for the server specified In the tender   | Nos                       | 6                   |      |  |
| 19      | Total Cost of Hardware (1 to 18)  |                           |                     |      |  |
| 20      | Facility Management Services charges as per details specified in scope of work as a percentage of total Hardware cost per quarter. (Three months) | % of Sr No 20 per Quarter | 12 Quarters         |      |  |
|         | Total Bid cost (Sl. No. 19 + 20)  |                           |                     |      |  |