

Annexure-I**Scope, Technical Criteria, Maintenance, Lease Rentals****Terms Used:****OEM** – Original Equipment Manufacturer / Principal Equipment Manufacturer**Bidder** – Vendor participating in the tender as per the qualification criteria**Vendor** – Successful Vendor executing the contract after tender process**AMC** – Annual Maintenance Contract**SAN** – SAN Storage

A. Scope of R&D SAN Storage Lease Contract		Bidder's Compliance Yes / No	Bidder's Remarks
1.	<p>The scope of ERD-SAN Lease contract consists of:</p> <ul style="list-style-type: none"> • Supply and Installation of Compact High Performance SAN Storage. • Migration of Applications / Data to the new SAN Storage and Technical Support for the operation of SAN Storage. • Comprehensive Maintenance and Support of SAN Storage. • Lease Period: FIVE years. • Solution to be installed/implemented BHEL, Ramachandrapuram, Hyderabad. 		

B. Qualification Criteria for Bidders		Bidder's Compliance Yes / No	Bidder's Remarks
2.	Bidder should be OEM of the SAN Storage OR Authorized Integrator / Channel Partner having direct purchase and support agreement with the OEM.		
3.	<p>Bidder shall submit a Letter of Authorization from OEM for this specific tender in support of the following:</p> <ul style="list-style-type: none"> - Authorization to quote for this tender - OEM Support for 5 years <p>A Bidder shall submit only one bid of a single OEM.</p>		
4.	<p>Bidder must have implemented TWO separate installations, each with SAN size of 20TB or more (in a single instance) including storage based site replication.</p> <p>The implemented solution could be part of the total order.</p> <p>Copy of the contract and execution shall be submitted with tender documents.</p> <p>In addition Bidder should have a minimum of TWO years of experience of Annual Maintenance/Lease rental contract for SAN operation/maintenance.</p>		
5.	<p>Bidder should have a minimum cumulative turnover of 100 Crores for the last three years. Financial Statements (abridged / extract) for the last three years (2008-09, 2009-10, and 2010-11) shall be submitted with tender documents.</p> <p>BHEL reserves the right to verify the information and requisition the bidder for additional documents.</p>		

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6.	Bidder shall satisfy statutory requirements / registrations applicable for the execution of Works Contract - PAN, VAT, GST / CST / ST, ESI / PF, etc. Copies of the certificates shall be submitted with tender documents.		
7.	Bidder shall fulfill all statutory and safety requirements for personnel engaged in the contract execution. Due to noncompliance of the applicable statutory provisions, if BHEL has to incur any expenditure in this regard the same will be compensated by the Bidder.		

C. Technical Criteria, Maintenance/Support, Lease Rental		Bidder's Compliance Yes / No	Bidder's Remarks
8.	<p>Technical Criteria for SAN Storage – Two units - One unit at Primary Data Centre and other one at Secondary Data Centre</p> <p>Each Storage unit shall meet the following criteria / capabilities / features</p> <ul style="list-style-type: none"> a) SAN Storage solution shall be rack mountable (supply with Rack mount kit). b) Solution Form Factor – up to 6U c) Data Capacity – 12 TB (or higher) excluding spare disks i.e. pre-raid d) Shall support RAID5 or RAID6. Support for RAID 1, RAID10 may be added. e) Min of TWO global hot spare disks or Spare Disk capacity of 15%. f) Dual Controllers in Active / Active Mode for all protocols, having <ul style="list-style-type: none"> - Processor – minimum of 4 CPU Cores per controller - System Memory – 16 GB (min) across controllers g) Interconnect: <ul style="list-style-type: none"> - FOUR 8Gb-FC Ports per controller in the FrontEnd (Controller to Server) - 6Gb SAS and/or 8Gb FC in the BackEnd (Controller to Bay) - Remote Management Port - 1Gb Port h) Redundant Power Supplies. i) Redundant power backup for 24 Hours ensuring cache to be safe during power failure i.e. 24-Hour cache protection. j) Support online upgrade / replacement of parts and software/firmware. k) Shall support all protocols for SAN – Licenses shall be included. l) Storage Disks shall be based SAS 2.0 or FC with 10K/15K RPM. m) Qualified support for Server and Desktop Virtualization using VMWare, Citrix and Hyper-V. n) License shall be included for Local & Remote Bi-directional Replication (Sync & Async) for the total data capacity. Storage Management Software on Windows / CLSH / Browser / Mobile. o) Host volume automated management system software to manage Storage and Host from same management console. 		

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Tender Description: ERD-SAN Storage 5-Year Lease

	<p>p) Manage Multiple storage arrays and hosts from single management console.</p> <p>q) Automatic Error / Warning alerts on Email</p> <p>r) Built-in reporting functionality for Statistics and Performance Monitoring</p> <p>s) The Storage array shall support native multi-path capability of the operating systems, such as Windows, Linux, etc.</p> <p>t) The Storage Array shall support operating system platforms and clustering including Windows, Sun Solaris, HP-UX, AIX, Linux, Xen and ESX.</p> <p>u) Shall support including Licenses for</p> <ul style="list-style-type: none"> ➤ 100 Host Connections ➤ 200 LUNS ➤ Snapshots ➤ SAN Boot on Windows / LINUX / XEN / ESX ➤ Online LUN Expansion / Compression <p>v) Solution shall be scalable for additional storage of 12 TB (Ref 8c)</p> <p>w) Maximum Power Consumption – 1000 W per chassis</p>		
9.	<p>Certification / Qualification: The SAN Storage solution must have Third Party Certification by Microsoft or Oracle. Copy of Certificate shall be submitted.</p> <p>Compatibility matrix shall be provided for various Host Operating Systems as applicable.</p>		
10.	<p>Technical Criteria for SAN Switch - FOUR Units, each switch with</p> <ul style="list-style-type: none"> a) Make: Brocade or Brocade compatible b) 24 Non-Blocking Port of 8Gbps (FC) c) 16 Active / Enabled Ports (with License). d) Single / Dual Power supply with integrated system cooling fan e) 16 SFPs of – LR/LWL - 4 Nos, SR/SWL – 12 Nos, along with Fibre Patch cords (length~10M). f) Trunk License and VSAN Licenses shall be included. g) Two Switches each at DC and DR. The switches shall be configured in redundant mode at each site and replicated between sites. h) Rack Mount kits for all switches shall be provided. 		
11.	<p>Licenses: All applicable Software / Licenses required to meet Clause 8 & 10 shall be part of the contract for the entire storage array capacity.</p> <p>The proposed storage should be configured and licensed for all protocols including FC and FCoE (Fibre Channel over Ethernet) and capable of running in active-active mode across the controllers.</p> <p>For all Software, Licenses, Support, Warranty, etc. the Vendor shall have agreement with the OEM valid for the Lease Period.</p>		

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12.	Performance for the Unified Storage solution including SAN Switch: <ul style="list-style-type: none"> • Uptime of 99.99% (Min) 		
13.	Supply: Complete Bill of Materials, with respective OEM Part Numbers, shall be given submitted by the bidder with the Tender. Installation / Implementation: Schedules shall be given by the Bidder.		
14.	Acceptance Test Plan: <ol style="list-style-type: none"> a. Migration of all Data for Applications as per the requirement of BHEL with minimum downtime. b. Local and Site Failover shall be demonstrated. 		
15.	Comprehensive maintenance shall include the following : <ol style="list-style-type: none"> a. Service, Repair / Replacement of faulty equipment b. Configuration, Trouble shooting, Performance Testing c. Service / Support – Next Business Day 		
16.	On-site Comprehensive insurance for the complete project shall be arranged by the Vendor at vendor's cost throughout the period of lease contract. Evidence of insurance policy shall be submitted to BHEL.		
17.	Delivery shall be completed in TEN weeks. For delay in supply of SAN Storage and SAN Switch, Penalty will be levied at the rate ½ % per week of delay on Outright Purchase Value, subject to a maximum of 10% of Outright Purchase Value. Total Penalty will be deducted from the initial Lease Payments.		
18.	Equipment shall be supplied with relevant test certificates, certificate of newness of equipment and any other statutory documents. Complete technical literature pertaining to the products, any relevant bench mark results/test results are to be submitted along with technical offer.		
19.	Lease rentals quoted shall remain FIRM for entire Lease period and shall be inclusive of the following: <ol style="list-style-type: none"> a. Freight, handling and packing charges, transit insurance, installation. b. On-site comprehensive maintenance c. Spares & Software/Firmware Updates d. Applicable Taxes as given in the Price Bid 		
20.	Lease Rental will commence only after the completion of the Project as per the scope of the contract. The completion of installation and commissioning shall be certified by BHEL as per the Acceptance Test Plan.		
21.	Lease Rentals will be paid on quarterly basis, on successful completion of each quarter as per this specification and on certification by BHEL.		

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22.	<p>Terminal charges to be paid at the end of the Lease Contract period shall be ONE Rupee only.</p> <p>On payment of the terminal charges, the ownership of entire equipment, accessories, spares & software will get transferred to BHEL without any further payments.</p> <p>BHEL reserves the right to take possession of the equipment by paying the terminal charges. In case BHEL decides to surrender the equipment after the expiry of the contract, Vendor shall remove the equipment from BHEL premises at vendor's risk and cost after due permission from BHEL.</p>		
23.	<p>Annual Maintenance after Lease Period (AMC): Vendor shall undertake to maintain the equipment for a period of THREE years. The charges for Annual maintenance shall be 5% and BHEL reserves the right for AMC and terminate the contract with a notice of TWO months.</p> <p>The scope for AMC includes the maintenance and performance clauses of this document as reproduced below.</p> <p>Comprehensive maintenance shall include the following :</p> <ul style="list-style-type: none"> a. Service, Repair / Replacement of faulty equipment b. Configuration, Trouble shooting, Performance Testing c. Service / Support – Next Business Day <p>Performance: Uptime of 99.99% (Min)</p> <p>AMC Charges will be paid on quarterly basis, on successful completion of each quarter as per this specification and on certification by BHEL.</p>		
24.	<p>TRAINING</p> <p>Training of BHEL personnel shall be part of the contract, on the operation and maintenance of the equipment.</p> <p>During installation at BHEL, the associated BHEL personnel shall be guided on the configuration being made and usage.</p>		

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