

## **MAHARSHI DAYANAND UNIVERSITY ROHTAK**

### **Tender Notice**

Sealed Tenders superscribed as **Datacenter Establishment Solution** in two separate envelopes – one containing technical specifications and DD for tender fee of Rs. 4000/-; and the other containing financial bid and DD drawn in favour of the Finance Officer, M.D.University, Rohtak for Earnest Money @ 2% of the cost estimated by the bidder are invited from the OEM/distributor duly authorized for this deal by OEM only, latest by 17.09.2012 for the supply, installation and maintenance of the Datacenter. Tender document can be downloaded from <<http://www.mdurohtak.ac.in>>. The tenders will be opened in the Office of the University Librarian, M.D. University, Rohtak on 18.09.2012 at 2.30 P.M.

Registrar

**MAHARSHI DAYANAND UNIVERSITY**

**Rohtak-124001 [Haryana]**

**Phone 01262-393001**

**TENDER INVITATION**

**For**

**Supply and Installation of Equipment for the Establishment of the Datacenter,  
and Maintenance thereof**

**Tender Processing Charges = Rs. 4000.00**

**Last Date of Submission of Bids to the Supdt. I/C, Purchases & Stores, M.D. University,  
Rohtak**

**17.09.2012 up to 5.00 P.M.**

**Opening of Technical Bids : 18.09.2012 at 2.30 P.M.**

# MAHARSHI DAYANAND UNIVERSITY, ROHTAK

## TENDER NOTICE

- A. Sealed Tenders are invited for the supply and installation of equipments for the Datacenter, and maintenance thereof as per specifications and quantity in **Annexure-I**.
- B. The terms and conditions for the supply and installation of equipments for the Datacenter, and maintenance thereof, and other important information are given below:
1. The tender, complete in all respects, must reach the **Supdt. Incharge, Purchases & Stores, M.D. University, Rohtak- 124001 (Haryana)** under sealed cover latest by 17.09.2012 by 5.00 p.m. The tenders will be opened on 18.09.2012 at 2.30 PM in the Office of the University Librarian, Vivekananda Library, M.D. University, Rohtak. The bidders or their authorized representative will be allowed at their own costs to be present at the time of opening of quotation.
  2. Tender document can be downloaded from the University website <http://www.mdurohtak.ac.in>. The copy of the tender document, duly attested by the bidder, must be attached with the bid.
  3. The tender must be submitted along with the demand draft of Rs. 4000/- as tender processing fee. The bank draft should be drawn **in favour of the Finance Officer, M.D. University, Rohtak, payable at Rohtak. Bank Draft payable at any other place shall not be accepted.**
  4. The tender received after due date and time, without tender fee or EMD or incomplete in any other respect or technically not qualifying tender shall be liable to be rejected.
  5. The tender must be valid for a period of at least three months from the date of its opening.
  6. All costs / charges must be quantified and spelt out in clear terms. Non-quantified costs/charges shall not be considered and paid.
  7. The University stands registered with the Department of Scientific and Industrial Research for availing exemption from Custom Duty and Central Excise Duty. The necessary documents will be provided by the University. Octroi, if any, shall be paid by the bidder. The rates may be quoted keeping these facts in view.
  8. The delivery of the material shall be FOR University Main Store, M.D. University, Rohtak.
  9. The security / earnest money equivalent to 2% (two percent) of the total value of the bid, in the shape of Demand Draft drawn in favour of the Finance Officer, M.D. University, Rohtak, is mandatory and must accompany the bid failing which the bid will be rejected. The security / earnest money in other shapes will not be accepted. Earnest money of the unsuccessful bidders will be returned as soon as the deal is finalized.
  10. The successful bidder shall deposit performance guarantee equal to 10% of total cost

of the goods/equipments in the form of Bank Guarantee/FDR for the duration of the warranty period + 45 days. EMD amount will be returned as soon as the bid is finalized.

11. Earnest Money shall be forfeited if the supplier backs out after the placement of order. The bidder can also be proceeded against for other actions such as blacklisting, recovery of loss, etc.
12. No advance payment will be made.
13. The successful bidder will supply, configure and install all the equipments within 60 days from the date of letter of intent/order. If delay is caused by the circumstances beyond the control of the successful bidder, the successful bidder may request the Purchase Committee for extension of date which may or may not be granted. The Purchase Committee may impose a penalty @ 1% (one per cent) per day subject to a maximum of 10% (ten percent) in all of the cost of the bid for the delay.
14. The payment terms shall be as under :
  - a. The Supplier shall raise the invoice after the supply of material and satisfactory installation. The University shall make the payment within 30 days from the date of submission of invoice, if the invoice(s) is/are found in order and inspection report found satisfactory.
  - b. Service Tax and any other statutory tax / cess / levy shall be deducted at source as per Rules prevalent at the time, and deposited with the quarter concerned.
  - c. Costs/charges not mentioned in the quotation/tender shall not be paid.
  - d. Bank charges, if any, shall be borne by the supplier.
15. The bidders must append the following documents with the bid:
  - a. Copies of PAN / TAN.
  - b. Copies of Sales Tax Number along with latest Sale Tax clearance certificate.
  - c. Copy of Service Tax Number
  - d. List of clients along with complete addresses and telephone numbers.
16. Quantity of items/equipments, as given as **Annexure I**, can be increased or decreased or even deleted.
17. The equipments, which are not found according to specifications, and are thus not accepted, shall be lifted back by the successful bidder at their own cost/risk.
18. Damage to goods or any other loss due to accident etc. during transit shall be the responsibility of the supplier.
19. Goods shall be accepted subject to satisfactory installation/assembly report of the Inspection Committee / Committee of Experts.
20. During evaluation of the tender, the Purchase Committee may, at its discretion, ask the bidder for clarification of bids. The request for clarification and the response shall be in writing, but no change in prices or substance of the tender shall be sought, offered or permitted.
21. Only OEM or their dealers authorized for this bid are permitted to participate in the bid. The bidders shall append the Certificate of Authorization in original issued by the OEM for participation in this bid failing which the bid will be rejected.
22. The authorized bidder must have a minimum annual turn over of Rs. 10.00 crores

failing which the bid will be rejected. Proof of turn over may be appended with the bid.

23. The bidder must file rates for all the items. Partial bids are liable to be rejected.
24. The bidders must quote rates and other terms and conditions for all the equipments/items failing which tender will be rejected. Total cost of the bid will be one of the important deciding factor while deciding the bid in favour or against any bidder.
25. The Purchase Committee constituted for the purpose reserves the right to accept or reject any or all the bids or negotiate on any of the tender conditions/ items and to annul the bidding process and reject all the bids at any time prior to placement of order without assigning any reason thereto and without any obligation to inform the affected bidders.
26. The bidder should possess minimum three years experience in supply, installation and maintenance of servers and other related major equipments. Proof of implementation of similar projects at the premises of minimum three customers similar to M.D. University in size and requirement may be attached with the bid. Certificate of completed projects should be issued by the customer.
27. The bidder shall append a certificate with the bid that the firm has not been debarred / blacklisted for any reason / period by any Central/State Govt. Dept. / University / PSU etc. If so, particulars of the same may be furnished. Concealment of facts shall not only lead to cancellation of the order, but may also warrant legal action.
28. The dispute, if any, shall be subject to the jurisdiction of Courts at Rohtak. Any other jurisdiction mentioned in the bid or invoices or any other document shall have no legal sanctity.
29. Terms and conditions printed on bid of the firm, if any, shall not be binding on the university, except those mentioned specifically on the order, and acceptance of the order shall be construed as the firm's complete agreement to all the terms and conditions contained in the order and the tender notice.
30. The bidder will provide 03-year on-site warranty on all the equipments, and will also specify the post warranty comprehensive annual maintenance rates for another two years failing which bid will be liable to be rejected.
31. Installation and pre- and post-configuration of the servers and other equipments shall be the responsibility of the successful bidder/firm.
32. The technical bid will be evaluated on the basis of the following information to be supplied by the bidder:

(i) Submission of tender in time; (ii) Tender fee appended or not ; (iii) Technical specifications of items; (iv) Certificate of not being debarred/blacklisted/credentials of suppliers; (v) Proof of annual turnover in the form of audited balance sheet (vi) Proof of implementation of three similar projects at the premises of customers with phone numbers; (vii) Copy of PAN/TAN; (viii) Copy of Sales Tax Number along with latest Sale Tax clearance certificate; (ix) Copy of Service Tax Number; and (x) Authorization of OEM for the bid.

33. Kindly read the above terms and conditions and other information carefully before filing the bid. In case, any clarification/ other information is required, the undersigned may be contacted at Telephone No. 01262-393594/393596 on any working day (Monday to Friday) during office hours (9 a.m. to 5.00 p.m.).

Registrar

## Technical Specifications for Data-Centre

(Annexure-1)

S.No.	Item	Description with Specification	Qty
1	<b>Blade Chassis</b>		
	Description	Shall provide common resources for the Blade Servers like power, System Management, Cabling, Ethernet Management and extension, External fiber Channel Storage switching and connectivity. Chassis with all redundancy features. All components to be provided by the OEM and to be fully redundant	1
	Blade Bays and I/O bays	Sufficient Chassis to be provided to accommodate min 14 hot pluggable blades servers with SAS hard disks.	
	Blade Arrangement	Blade chassis should be able to support full and half height blades in combination without limitations on slots. I.e. Full- height blade should be able to sit adjacent to half height blades.	
	Mid-Plane	Chassis configured should not only support current generation of processors but should support future processor technology up to 5 years or more to provide an investment protection made today. High-Availability Dual Path Midplane or Passive Midplane with no active components to meet all reliability requirements for providing two-way communication paths for Ethernet, Fiber Channel, KVM Switches, Power Supply and Management Signals. the chassis should have minimum 5Tbps performance backplane.	
	LAN Interconnect module	2 No's of 10Gbe Switches with sufficient no. of 10Gbps ports with redundant connectivity to each blade servers populated in the chassis with minimum 4 up-link ports on each switch for external connectivity .	
	Management Modules	Dual redundant management modules to communicate with the system management processors on the blade server. The Management Modules shall be capable of providing KVM Connectivity for the Blade servers housed inside the chassis, Real time, actual power cons. Status/Inventory/Alerting for Blades, Chassis Infrastructure, & IOMs; Centralized Configuration; GUI & CLI; SSL/SSH ; Power/Thermal Monitoring; Dynamic power engagement; Temperature monitoring; Persistent WWN/MAC/Virtual Connect - Should allow customers to lock a WWN/MAC/Virtual Connect address into a specific blade slot.	
	Cooling	Chassis should be configured with Hot Swap & Redundant variable speed rear access blowers/ fan Modules	
	Power Module	Chassis should be configured with all the power supplies of highest capacity and should support N+N as well as N+1 configuration. Power supplies configured should be 80 PLUS Platinum certified.	
	Form Factor	Up to 10 U -19: Rack Mountable with 28"/32" Depth.	
	System Management	Shall provide support for remote console management, power on/off blades, modules shall monitor power status, operating system, temperature, disks, blowers, power modules system diagnostic programs provided through the management s/w. Real Time Power/Thermal Monitoring and Management	
	Power Management	Chassis should have an integrated tool that can provide a view of the actual power used (as opposed to benchmarked power consumption) and can effectively allocate, match and cap power and thermal limits in the data center at the system, chassis and rack level.	
	System Panel	Chassis should have LED/LCD panel to provide power-on, location, overtemperature, information and system error conditions	
	Ports	Front VGA & 1 USB ports for KVM.	
	SAN Interconnect Modules	Blade Enclosure should be configured with dual redundant hot plug Fiber Channel SAN switch modules with minimum 4 x 8Gbps uplink ports.	

**Technical Specifications for Data-Centre****(Annexure-1)**

S.No.	Item	Description with Specification	Qty
	Optical Disk	Chassis should be configured with Internal/external CD-ROM/DVD-ROM Drive which can be sheared among all the blade servers. The chassis should have minimum Two USB 2.0 ports.	
	Failure Alerting Mechanism	The chassis should be able to alert impending failures on maximum number of components like Blades, bridge/switch modules, I/O modules, management modules, power modules, colling modules, media tray	
	Warranty	3 yrs - 24/7 support for all parts on all working days.	



## Technical Specifications for Data-Centre

(Annexure-1)

S.No.	Item	Description with Specification	Qty
2	<b>Blade Servers.</b>	Web Server/ DatabaseServer/ Mail server/ Local server	
	Processor	2 x (Eight Core E5-2450, 2.1 Ghz or higher, 20MB cache or higher	6
	Memory	64 GB DDR-3 up to 1600MHz ECC Memory Upgradeable to 192 GB	
	Disk Drives	2 x 300GB 6Gbps10K SAS Hard Disk Drive with RAID1.	
	HDD Upgradeability	Should be able to support hot swap SSD drives	
	I/O Slots	2 Number of PCIe generation 3, x8 Slots	
	Ethernet	Server should be configured with 2 Number of 10G Ethernet ports and should support TCP/IP Offload Engine, support for virtual VNIC functionality, iSCSI and FCoE and should be SRIOV capable.	
	SAN HBA Connectivity	Configured with Dual Port 8Gbps Fiber Channel Expansion Card	
	Form Factor	Blade	
	Management	Integrated remote management card for Out of Band alerting, status, inventory, and troubleshooting via Secure Web GUI / CLI (telnet/SSH),Remote Virtual Media (vMedia) and Virtual KVM (vKVM),IPMI2.0 support, Chassis Management w/redundant dedicated NICs; A microcontroller should be responsible for acting as an interface or gateway between the host system (i.e., server management software) and the periphery devices.; Should support web GUI,HW update, Firmware rollback, OS Deployment, Life Cycle Log, View hardware sensors (temperature, voltage, presence, error sensors),Error alerts (server reset, critical sensor values, etc.) using email traps, paging, etc.,IPv6,WS-MAN/SMASH-CLP; redundand SD cards for fail safe hypervisor	
	Remote Server Management Utility	Server should be supplied with OEM Server Management software	
	Operating System compatibility	Red hat Linux 5 or above, Win 2008 standard and enterprise, SuSe Enterprise server 10.	
	Windows OS	All servers has to be supplied with Windows Server 2008 R2 SP1, Enterprise Edition,x64,Including 10 CALs, with Support for High availability clustering	
	Warranty	3 yrs - 24/7 support for all parts on all working days.	

## Technical Specifications for Data-Centre

(Annexure-1)

S.No.	Item	Description with Specification	Qty
3	Tape Library		1
	Make	Tape Library Should be on either of IBM, HP or Dell	
	Slots	24 Cartridges slots	
	Specifications	Minimum 2 latest generation LTO5 drives.	
	Media	At least 50 latest generation LTO5 drive Media Cartridges with 5 Cleaning Cartridges, Barcode labels shall also be provided	
	Warranty	3 yrs - 24/7 support for all parts on all working days.	
	<b>Back Up Software Description</b>	All backup/restore administration must be controlled by a centralized master system	1
		The master system must support the following systems: Windows 2000/2003/2008/2008R2 Linux (x8664) /Solaris Sparc & Solaris x8664), HP/UX (Itanium) & AIX (PowerPC)	
		Supported client systems include: Windows, Linux, Netware, Unix and Mac OS X Platforms	
		The software must be based on Graphical User Interface (GUI) so that all backup servers can be managed centrally, regardless of location	
		The tape format should be open standard MTF for Windows , and CPIO for Unix /Linux for portability and independence.	
		The proposed backup solution must be able to support raw device backup – on both Windows, Linux and Unix (IBM AIX, Sun Solaris & HP UX)	
		Automatic robotic/tape drive configuration. No scripting required.	
		Full backup and restoration capabilities management from remote location.	
		Network bandwidth compression for management of network utilization to reduce loads when backup occurs during production time.	
		Support for leading connectivity protocols like SAN iSCSI / FC, NAS,Ethernet Technologies 10/100/1000/10000 BaseT	
		Must be capable of "block level" backups for Bare Metal Recovery of Physical servers	
		Should have specific agents to perform "hot" backups on the following databases and applications such as: a) oracle on Windows/Linux and Unix b) Informix on windows/Linux and Unix c) Sybase on windows/Linux and Unix d) DB2 on windows/Linux and Unix e) MS SQL on window f) MySQL on Linux and Windows g) Postgres SQL on Linux and Windows h) Ms Exchange on Windows i) Lotus Notes in Windows/Linux and Unix	
		Should meet the following Media Management capabilities a. Allow tape library sharing among media servers b. Allow individual tape drive sharing among media servers and allow for reconfiguration without rebooting media servers c. Tape drive sharing must support both iSCSI and Fiber based connections.	
		The software should be capable of performing latent restores on Windows systems.	
		The software inbuilt reporting tool must has the ability to create customize reports without any additional purchase of another reporting module or 3 <sup>rd</sup> party reporting module	
		The size of index or catalogue file must be less than 100 bytes per files/folder/directories that are being backed up.	

## Technical Specifications for Data-Centre

(Annexure-1)

S.No.	Item	Description with Specification	Qty
		Ability to integrate with storage NAS snapshot based protection mechanisms by providing control GUI module	
		Ability to support and manage snap shot based backup, and file based backup “ under one roof “ while maintaining granular file level recovery.	
		Must support storage protocols such NDMP (version 3 & above). Please provide interoperability matrix with storage appliance firware/OS release compliance. Specify specific features advantages aligned with the storage vendors	
		Must be able to utilize Direct Access Restore for NDMP technologies to facilitate single file level restore.	
		Should support 5 ways NDMP Backup.	
		Support for server virtualization especially VMWare & Hyper-V	
		Must be integrated with VMware VADP with D2D2T layout. Must be synchronized with VMware VADP for data integrity.	
		Allows full VMware VADP backup by utilizing LAN, SAN and HotAdd advanced transport mechanisms to optimize data transfer of virtual machine backups.	
		Must support virtual machine backup online and supports file level VADP backups for virtual machines running Windows.	
		BOM of Backup agent SQL Server in Cluster Mode Web Server in Cluster Mode Exchange Server 2010 agent Bare Metal Active Director Backup NDMP Backup agent(Minimum 10 TB)	

## Technical Specifications for Data-Centre

(Annexure-1)

S.No.	Item	Description with Specification	Qty
4	<b>Storage Area Network</b>		<b>1</b>
	Specifications	Rack Mountable - Dual Active Controller	
		The storage array shall be configured with at least 16 GB or higher cache mirrored across two storage controllers for disk I/O operations.	
		Host Interface - 4 host ports per controller, Fiber Channel (FC), 8 Gbps per port	
		Drive Interface - Redundant 6Gbps SAS drive ports or 8 Gbps Fiber Channel (FC) ports.	
		Hardware RAID level Supported 0,1,5,6,10	
		Fans & power supplies - Dual redundant, hot-swappable/hot pluggable	
		SAN Support - Box should be compatible of SAN environment	
		Storage subsystem shall support 200GB or Higher SSD, 400/600 GB or higher SAS 10K RPM, 15K RPM or higher disks, NL-SAS/SATA or equivalent 7200 RPM or higher drives in the same storage array.	
		Presently, the storage sub system shall be configured with 10 TB on 300 GB 15K RPM drives on raid 5.	
		The storage system must provide upgrade path to larger or future array controller and software technology by controller upgrade or data migration.	
		All the necessary software to configure and manage the storage space, RAID configuration, logical drives allocation, snapshots and snap clones etc.	
		Redundant power supplies, batteries and cooling fans.	
		Load balancing must controlled by system management software tools.	
		The Multi-path software should support supplied or heterogeneous storage and operating.	
		The storage array must have complete cache protection mechanism either by destaging data or providing complete cache data protection with battery backup for up to 72 hours or more.	
		The storage array should support Operating System Platforms & Clustering including Windows Server 2008 (Enterprise Edition) , LINUX for x86. Any software or license required to enable connectivity to all these OS should be included.	
		Storage should support non-disruptive online firmware upgrade for both Controllers.	
		The storage should provide automatic rerouting of I/O traffic from the host in case of primary path failure.	
		Should provision for LUN masking and SAN security.	
		Should support Array Replication	
		Should support how-swappable physical drive capacity expansion with the addition of extra hard disks.	
		The storage system should be scalable to more than 200 drives..	
		Should be able to support clustered and individual servers at the same time.	
		Should be able to take —snapshots of the stored data to another logical drive on a different Disk/RAID group for backup purposes.	
		Should be configure with snapshots and clone (local and remote) , licenses for the storage & clone features.	
		Vendor should also offer storage performance monitoring and management software.	
		The vendor must provide the functionality of proactive monitoring of Disk drive and storage system for all possible hard or soft disk failure.	
	Warranty	3 yrs - 24/7 support for all parts on all working days.	

## Technical Specifications for Data-Centre

(Annexure-1)

S.No.	Item	Description with Specification	Qty
5	<b>UTM device</b>		<b>2</b>
	<b>General and Performance Specifications.</b>	The Firewall should be an ASIC based firewall or multi CPU based hardware appliance. For High performance for small packet size The Firewall should have integrated Firewall and VPN functionality. Firewall should deliver a throughput of minimum 15 Gbps for 64 byte packet size 3DES/AES with SHA VPN performance should be at least 2.5 Gbps. Firewall packet handling performance should be adequate to deliver the throughput asked for. Firewall should support 6 million Concurrent sessions. Firewall should support at least minimum 50000 new sessions/second. Firewall should be appliance based and should have minimum of 8 x GE ports and 2 x 10GE ports Should have licensed Antivirus with minimum performance 1 Gbps and IPS with 3 Gbps Unlimited License for category based Webfiltering and option to create webfiltering based on IP/User/ usergroup. UTM should have option to create policy based on User with integration with RADIUS or LDAP or directly with AD Should have build-in DoS protection as well as Application control without any additional license	
	<b>Operational Modes.</b>	The Firewall should support Layer 2 (Transparent) mode and Layer 3 mode. Firewall should support static NAT; Policy based NAT and PAT (Port Addressed Translation).	
	<b>Firewall.</b>	Firewall should provide TCP reassembly for fragmented packet protection. Firewall should be able to support a minimum of 4096 VLANs. Firewall should support Geo-location based rules Explicit Proxy support for HTTP and FTP connection plus for Citrix and Terminal Server as well.	
	<b>VPN.</b>	Firewall should support at least 5000 IPSec tunnels. Firewall should be capable of dynamic routing on VPN. Firewall should support SHA-1 and SHA-2 authentication. This should be Hardware accelerated Firewall should support client based IPSec VPN Tunnels. Firewall should be able to prevent against replay attacks. Firewall should support IPSec NAT Traversal/ALG. Firewall should support SSL VPN. With License of 300 user should be provided from day one.	
	<b>High Availability.</b>	Firewall should support Active/Passive High Availability. Firewall should support Active/Active High Availability. Firewall should use Only one IP address for both members of the Firewall plus virtual IP should be the same IP address as well. ( this is to prevent wastage of IP address for HA cluster ) Firewall should support Stateful failover of firewall sessions.	

## Technical Specifications for Data-Centre

(Annexure-1)

S.No.	Item	Description with Specification	Qty
		Firewall should support device failure detection.	
		Firewall should support link failure detection.	
		Firewall should support authentication for HA members.	
		Firewall should support encryption of HA traffic.	
		Support for OSPF and BGP routing protocol	
	<b>Routing.</b>	Support for VRRP and Link Failure Control	
		Firewall should support static routes	
		Should support Multicast with features like RPF, IGMP and PIM.	
		Should support Multicast inside IPsec tunnel.	
		Should support dual stack IPv4 / IPv6 Firewall and VPN.	
	<b>IPv6 Support</b>	Support for IPv4 to/from IPv6 translations or tunneling.	
		Should support Virtualization (Virtual Firewall, Security zones and VLAN). Minimum 10 Virtual Firewall license should be provided	
		Firewall should support Web based (HTTP and HTTPS) configuration and management.	
	<b>Firewall Management</b>	Firewall should support Command Line Interface using console, Telnet and SSH.	
		Firewall should support management via VPN tunnel on any interface.	
		Should support Syslog server logging.	
	<b>Logging.</b>	Should support notification through email.	
		Should be able to integrate with third party logging servers like NetIQ Web Trends.	
		Should have support for SNMP V1 to V3.	
		<b>Support for voice protocols: H.323, SIP, and NAT/ ALG for H.323/ SIP.</b>	
		PKI Certificate requests (PKCS 12).	
	<b>Firewall should have following PKI Support.</b>	Automated certificate enrolment (SCEP).	
		Online Certificate Status Protocol (OCSP).	
		Firewall should support multilevel administration privilege.	
	<b>Administration.</b>	Firewall should support software upgrades using secure web Interface	
		Firewall should support Command Line Interface using console SSH.	
		Firewall should support management via VPN tunnel on any interface.	
		Should support configuration rollback.	
		UTM should have ICSA certification for Firewall,SSL VPN,Antivirus and IPS	
	<b>Certification</b>	Firewall OS should be EAL 4+ certified	
		42 U Rack for placing Servers Storage and tape library ( 1200mm x 1000mm) Rack should be of same make as of servers and storage	
	<b>Warranty</b>	3 yrs - 24/7 support for all parts on all working days.	

## Technical Specifications for Data-Centre

(Annexure-1)

S.No.	Item	Description with Specification	Qty
6	Rack Infrastructure		1
		Floor Standing Server Rack - 42U with Heavy Duty Extruded Aluminium 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 500Kgs.	
		The racks should conform to Standard for Cabinets, Racks, Panels and associated Equipment and accommodate industry standard 19" rack mount equipment. Should be from same OEM of server & Storage	
		Front and Back doors should be perforated with at least 63% or higher perforations.	
		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 (4u to 5U size) Keyboard Tray with BB Slides (Rotary Type) (1 no. per Rack), stationary shelf 627 Mm (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 cooling system.	
		Racks should have Rear Cable Management channels, Roof and base cable access	
		Wire managers: Two vertical and four horizontal.	
		Door: The racks must have steel (solid / grill / mesh) front / rear doors and side panels. Racks should NOT have glass doors / panels. Both the front and rear doors should be designed with quick release hinges allowing quick and easy detachment without the use of 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) .	
		Depth Min. 1000 mm	
		Metal Aluminum extruded profile	
		Side panel Detachable side panels (set of 2 per Rack)	
		Width 19" equipment mounting, extra width is recommended for managing voluminous cables	

## Technical Specifications for Data-Centre

(Annexure-1)

S.No.	Item	Description with Specification	Qty
7		<b>Power Distribution Unit for Rack</b>	2
		Switched receptacles provide remote on and off functionality to allow for power cycling and to help prevent unintended overloading	
		Monitored power draw at the receptacle level	
		Graphical LCD should show input current of each phase enabling Intuitive load balancing	
		Detailed data-logging for statistical analysis and diagnostics	
		Comprehensive power management and flexible configuration through a web browser, NMS, Telnet, SNMP, or HyperTerminal (console)	
		Supply power to 24 receptacles	
		Onboard web interface for remote management	
		Organizes power distribution and simplifies cable management	
		32-amp circuit breakers protect against overload conditions	
		Flash upgradeable for quick and easy upgrades	
8		<b>Rack Mountable Folding LCD Monitor with In-built Keyboard &amp; Mouse (same OEM of Server &amp; Storage)</b>	1
		1 U Rack Mount	
		Foldable	
		Display size: 17 inches diagonal	
		Contrast Ratio: 700:1	
		Display colours: 16 million	
		Resolution: SXGA 1280 x 1024	
		Brightness: 300 nit	
		Compatible to both PS/2 and USB based inputs	



## Technical Specifications for Data-Centre

(Annexure-1)

S.No.	Item	Description with Specification	Qty
9	<b>Client Computers</b>		12
	Processor	Intel(R) Core(TM) i7-3770 Processor (8M Cache, up to 3.90 GHz, w/Integrated HD4000	
	Motherboard Chipset	Q77	
	Video	1GB AMD RADEON HD 7570,LP, with DVI-VGA Adapter	
	Network	Integrated Intel® 82579LM Ethernet LAN 10/100/1000	
	Ports	4 External USB 3.0 ports (2 front, 2 rear) and 6 External USB 2.0 ports (2 front, 4 rear) and 2 Internal USB 2.0 (MT/DT only); 1 RJ-45; 1 Serial; 1 VGA; 2 Display Port; 2 PS/2 (MT/DT/SFF only); 2 Line-in (stereo/microphone), 2 Lineout(headphone/speaker)	
	Sound Controller	Integrated Audio	
	Memory	8GB (2x4GB) Non-ECC DDR3 1600MHz SDRAM Memory expandable to 32 GB RAM Up to 4 DIMM slots	
	Storage	1TB 7200 RPM 3.5" 512e/4k SATA Hard Drive	
	Optical Drive	DVD R/W	
	Keyboard & Mouse	USB Optical Mouse/KB	
	Monitor	24"W Full HD Monitor with LED Advanced Exchange (Next Business Day)	
	Power Management	250W up to 90% Efficient PSU; Energy Star 5.0 compliant, Active PFC	
	System Chassis	tool less DT Chassis less than 16 lts	
	OS Support	Win 7 Professional Pre installed.	
10	<b>Client Computers(Low End)</b>		30
	Processor	Intel(R) Core(TM) i5-3550 Processor 3rd Generation (Min 6M Cache, up to 3.70 GHz, w/Integrated HD2500	
	Motherboard Chipset	Q77	
	Video	Integrated	
	Network	Integrated Intel® 82579LM Ethernet LAN 10/100/1000	
	Ports	4 External USB 3.0 ports (2 front, 2 rear) and 6 External USB 2.0 ports (2 front, 4 rear) and 2 Internal USB 2.0 (MT/DT only); 1 RJ-45; 1 Serial; 1 VGA; 2 Display Port; 2 PS/2 (MT/DT/SFF only); 2 Line-in (stereo/microphone), 2 Lineout(headphone/speaker)	
	Sound Controller	Integrated Audio	
	Memory	8GB (2x4GB) Non-ECC DDR3 1600MHz SDRAM Memory expandable to 32 GB RAM Up to 4 DIMM slots	
	Storage	500GB 7200 RPM 3.5" 512e/4k SATA Hard Drive	
	Optical Drive	DVD R/W	
	Keyboard & Mouse	USB Optical Mouse/KB	
	Monitor	18.5" Monitor with LED backlight TCO 5 with Advance exchange ( NBD Support)	
	Power Management	250W up to 90% Efficient PSU; Energy Star 5.0 compliant, Active PFC	
	System Chassis	tool less DT Chassis less than 16 lts	
	OS Support	Win 7 Professional Pre installed.	

## Technical Specifications for Data-Centre

(Annexure-1)

S.No.	Item	Description with Specification	Qty
11	<b>Laptops</b>		4
	Processor	3rd gen Intel® Core™ i5-3210M processor (with Turbo Boost 2.5 up to 3.1 GHz	
	Motherboard Chipset	Intel® Mobile HM77 Panther Point Express Chipset	
	Video	Nvidia GeForce GT 630M 1GB	
	Network	Intel® Mobile HM77 Panther Point Express Chipset	
	Ports	USB 3.0 X 3 , USB 3.0 with Power Share x 1 (4 total) ,VGA, HDMI, LAN RJ-45, Power, headphone/ headset/ speaker out	
	Sound Controller	Integrated.	
	Memory	4 GB RAM.	
	Storage	500GB - 7200RPM SATA Hard Drive.	
	Optical Drive	DVD R/W.	
	Keyboard & Mouse	Backlit Keyboard w/ Multi-touch Touchpad.	
	Monitor	15.6 inch Wide Display HD (1366 x 768) w/anti-glare.	
	Power Management	6 cell battery.	
	System Chassis	Carry case-same as of OEM.	
	OS Support	Win 7 Professional Pre installed.	
12	<b>UPS</b>		3
	Description	10 KVA dual Online UPS, 3 Phase In 1 Phase Out with atleast 4 Hrs backup, Intelligent web based Management.	
13	<b>Printers</b>		
	Printers	HP LaserJet M9050 MFP Printer A3, 55 PPM	3
		HP LaserJet 9040DN Printer A3	3
		Heavy Duty Line Matrix Printer min 1800 lines Per Minute	2
14	<b>SOFTWARES</b>		
a	Server	Visual Studio.net 2010/12	10
b	Development Tools	Telerik Rad Control Universal Suite (Development Controls)	10
		Dev Express Control Universal Suite (Development Controls)	10
		Adobe Creative Suite 6 Master Collection	10
	Database	Sql Server 2012	4
c	exchange server	Exchange Server 2010	2
d	Office	MS Office 2010 Volume License free as when update available to 2012	30
	Antivirus	Symantec End Point Protection 12.0	10