NIT NO.:/ MDU-R/JAN/2015/PRO/2

TENDER DOCUMENT

for

Name of work: Supply, Installation, Testing and Commissioning of Blade Servers, Storage, Deployment of Virtualization Solution to virtualize the Servers, Migration of existing applications and data into Servers and Storage.

TENDER PROCESSING CHARGE: Rs.4000/- (non-refundable)

Last date of submission of the filled Tender document: 10.02.2015, upto 2:30 pm.
(The Tender document is to be submitted duly signed in blue/black ink on each page and stamped with official seal on each page)

Maharishi Dayanand University
Rohtak – 124001 (Haryana)
Phone: 01262-393597

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1. BRIEF DESCRIPTION OF PROPOSAL

University is committed to encourage inter-disciplinary higher education and research to spread knowledge to every strata of the society. It aims at creating an innovative, value-based, and research-oriented world-class learning environment and establishing itself as a centre of excellence. The University invites Technical and Financial proposals from leading Blade Server OEMs – IBM/Lenovo, DELL, CISCO and HP or their authorized distributers/system integrators registered firms having income tax, Service Tax registration and who are an authorized agent/supplier of the following or similar work "Supply, Installation, Testing and Commissioning of Blade Servers, Storage, Deployment of Virtualization Solution to virtualize the Servers, Migration of existing applications and data into Servers and Storage", Original Equipment Manufacturer (OEM) and are capable and have been providing total solution and necessary support for at least last five years, for Supply, Installation, Testing and Commissioning of Blade Servers, Deployment of server virtualization Solution, Migration of existing applications and data into new Servers and Storage **to University Computer Centre, M.D. University, Rohtak- 124001**.

This is a two part bid with a Technical bid and a Financial Bid forming the two parts. The Technical and Financial bids should be sealed in separate envelopes and, then, both sealed covers should be placed in one separate envelope (which is to be sealed) clearly superscribing on the envelope, "Supply, Installation, Testing and Commissioning of Blade Servers, Storage, Deployment of Server Virtualization**".**

The important dates & details of the Tender process are:-

S. No.	Description	Important Information
1.	Date of publishing of Tender	09.1.2015
2.	Date of closing of Tender	10-02-2015 (2:30 P.M.)
3.	Date of Opening of Technical Bid	10-02-2015 (3:30 P.M.)
4.	Tender document Processing Charge	Rs 4000/- (Non-Refundable)
6.	E.M.D.(Earnest Money Deposit)	2% of Bid Amount
7.	Period of validity of Tender	At least 90 days from the last date of bid Submission, as advertised.
8.	Opening of Financial Bid	Will be subsequently informed to successful bidders through appropriate
9.	Place of opening the Bid	University Computer Centre, Rohtak

2. COVERING LETTER:

Format of letter to be submitted with the Tender for Supply, Installation, Testing and Commissioning of Blade Servers, Storage, Deployment of Virtualization Solution to virtualize the Servers, Migration of existing applications and data into Servers and Storage, **University Computer Centre**, M.D. University, Rohtak- 124001.

To,
D.R. Purchase & Supply Branch
MD University
Rohtak – 124001 (Haryana)

Sub: Supply, Installation, Testing and Commissioning of Blade Servers, Storage, Deployment of Virtualization Solution to virtualize the Servers, Migration of existing applications and data into Servers and Storage to University Computer Centre Rohtak.

Dear Sir,

1. This is with reference to your TENDER notice dated ………………. I have examined the TENDER document and understood its contents. I hereby submit my Bid Supply, Installation, Testing and Commissioning of Blade Servers, Storage, Deployment of Virtualization Solution to virtualize the Servers, Migration of existing applications and data into Servers and Storage**, University Computer Centre**, M.D. University, Rohtak- 124001,

2. The Bid is unconditional for the said Tender. This bid is valid for a period not less than 90 days.

3. It is acknowledged that the Authority will be relying on the information provided in the Tender and the documents accompanying such Tender for qualification of the bidders for the above subject items and we certify that all information provided in the Tender and in Annexures are true and correct; nothing has been misrepresented and omitted which renders such information misleading; and all documents accompanying the bid are true copies of their respective originals.

4. This statement is made for the express purpose of the above mentioned subject.

5. We shall make available to the Authority any additional information it may find necessary or require to supplement or authenticate the Qualification statement.

6. We acknowledge the right of the Authority to reject our bid without assigning any reason or otherwise and hereby relinquish, to the fullest extent permitted by applicable law, our right to challenge the same on any account whatsoever.

7. It is declared that:
    a) We have examined the Tender document and have no reservations to the Tender document.
    b) We have not directly or indirectly or through an agent engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice in respect of any Bid or request for proposal issued by or any Agreement entered into with the Authority or any other public sector enterprise or any Government, Central, State or local.

8. It is understood that the University may cancel the Bidding Process at any time without incurring any liability to the University and that you are neither bound to invite the applicants to Bid for the items nor to accept any bid that you may receive.

9. It is understood that the University can use any evaluation scheme/evaluation metrics/weightage or take the help of any consultant, as required in selecting the successful agency/agencies and we agree to abide by it.

10. It is certified that we have not been convicted by a Court of Law or indicted or adverse orders

passed by a regulatory authority which could cast a doubt on our ability to undertake the Services or which relates to a grave offence that outrages the moral sense of the community.

11. It is here by certified that the firm has not been debarred/blacklisted for any reason/period by any central/state Govt. department/University/PSU etc.

12. It is hereby affirmed that we are in compliance of/shall comply with the statutory requirements, as applicable.

13. We hereby irrevocably relinquish any right or remedy which we may have at any stage at law or howsoever otherwise arising to challenge or question any decision taken by the Authority in connection with the selection of bidders, selection of the Tenderer, or in connection with the selection/Bidding Process itself, in respect of the above mentioned items and the terms and implementation thereof.

14. We agree to undertake to abide by all the terms and conditions of the TENDER document.

15. We agree to undertake to be liable for all the obligations of the Tenderer under the Agreement. In witness thereof, we submit this application under and in accordance with the terms of the TENDER document.

Place:- …………………………….   **Yours faithfully,**

Date :…………………………..   (Signature, name and designation of the
                                                                       Tenderer/Authorized Signatory)
                                                                                Official Seal

3. PARTICULARS OF TENDER

1.TENDER No. : MDU-R/JAN/2015/PRO/2

2. Particulars of the work : Supply, Installation, Testing and Commissioning of Blade Servers, Storage, Deployment of Virtualization Solution to virtualize the Servers, Migration of existing applications and data into Servers and Storage**, University Computer Centre**, M.D. University, Rohtak- 124001

3. Processing charge : Rs. 4000/- in the form of Demand Draft in favor of Finance Officer Rohtak, Payable at Rohtak (Non-Refundable)

4.Last date and time of submission of TENDER (by hand/post) : 10-02-2015 (2:30 P.M.)

5. Amount of EMD (Interest-free) : 2% of Total Bid Value in the form of Demand Draft in favor of MDU Rohtak, payable at Rohtak

6. Period of validity of TENDER : At least 90 days from the last date of submission filled tenders, as advertised.

7. Date and time of opening of TENDER : 10-02-2015 (3:30 P.M.) (Technical Bid Only)

8. Place of opening of TENDER : University Computer Centre Rohtak, M.D. University, Rohtak

9. Name & address of firm/company/ individual to whom TENDER document belongs to. --

(Signature of Tenderer)
Official seal

4. GENERAL PARTICULARS OF TENDERER

Part – I

1. Name of the Firm/Vendor/Supplier/Agency -

2. Full Address with Office contact and mobile numbers, website, e-mail etc.

3. Constitution of the Firm/Agency (attach copy of registration) under

   a) Indian Companies Act 1956.

   b) Indian partnership Act 1932. (Please give names of partners)

   c) Any other Act, if not the Owners.

4. If Partnership Firm, registered under the Indian Partnership Act, 1932, please state further whether the partnership agreement/deed has been conferred on the partner who has signed the Tender.

   a) If No, whether there is any general power of attorney executed by all the partners of the Firm authorizing the partner who has signed the Tender.

   b) If Yes, please furnish a copy of either of partnership Agreement or the general power of attorney as the case may be. The power of attorney should on appropriate stamp paper by all the Partners and duly attested by a Notary Public.

5. Permanent Income Tax account No. of the Firm with circle/ward and Service Tax Registration Certificate (duly attested photocopy to be attached).

6. Any other relevant information.

Part – II

1. Details of Earnest Money Deposit (EMD)

   (If attached or not and details of the mode)

Part – III

1. Name and address of the firm's representative who would be present with a photo-identity proof along with the authorization letter at the time of opening of Tenders.

2. Name of the authorized representative of the Tenderer to sign the contract documents on behalf of Tenderer.

3. Firm/Agency Registration –Number and other details (Attested photocopy to be attached).

4. Certified copies of Income Tax and sales Tax Return for financial years – 2011-12, 2012-13 & 2013-14.

5. Details of previous experience of Supply, Installation, Testing and Commissioning of Blade Servers, Storage, Deployment of Virtualization Solution to virtualize the Servers, Migration of existing applications and data into Servers and Storage to Govt./Autonomous Institutions preferably in the northern region. Attach Copies of at least 5 purchase orders for each financial year for last three years.

Date: …………………

Place: …………………..

Authorized Signatory

(Signature of Tenderer)

Official seal

TERMS AND CONDITIONS

1. This is a two part bid with separate Technical Bid & Financial Bid forming the two parts. The Technical & Financial Bid should be sealed in separate envelopes & then both sealed envelopes should be placed in one separate envelope clearly superscribing on the envelope "Quotation for Supply, Installation, Testing and Commissioning of Blade Servers, Storage, Deployment of Virtualization Solution to virtualize the Servers, Migration of existing applications and data into Servers and Storage,". The bid document should be duly signed in ink and stamped on each page.

2. Prescribed format for Technical Bid **"Annexure A"** and for the Financial Bid **"Annexure B"** is only to be used.

3. The price quoted will be applicable to the specifications mentioned at Annexure "A" and will remain valid for at least 90 days.

4. The bidder should be an authorized agent/supplier of Original Equipment Manufacturer (OEM) and should be capable of providing total solution and necessary support.

5. The bidder should submit an attested photocopy of Authorization Certificate from the Principal (OEM) authorizing them to bid for the tender along with the Technical Bid.

6. The bidder should have support office in Delhi/NCR/Haryana to provide 24X7 necessary support.

7. Processing Charge Rs.4000/-(Non-refundable) in the form of Demand Draft in favor of Finance Officer MD University Rohtak, payable at Rohtak should be attached with the Technical Bid.

8. The Financial Bid should be accompanied with an Earnest Money Deposit (EMD) of Rs. 2% of Bid Amount in shape of Demand Draft, in favour of Finance Officer MD University Rohtak, payable at Rohtak. EMD of unsuccessful bidder will be returned subsequently. No interest shall be paid on EMD.

9. The selected bidder will be required to supply and install the items within 4 weeks from the date of issue of Purchase Order.

10. Please specify the minimum period for delivery if you are not able to supply the items within 4 weeks. Early delivery will be a crucial factor in deciding the successful bidder.

11. No advance payment shall be made; any offer linked with advance payment is likely to be ignored/rejected.

12. After winning the order, if the vendor fails to supply, EMD will be forfeited and also the vendor will be blacklisted from participating in any future bid.

13. A penalty of 0.5% of the total order value will be imposed per week for late delivery.

14. A three year Onsite OEM warranty on the Blade Servers, Virtualization Solution will be required. After completion of OEM warranty, AMC from OEM for next two years (year 4th & 5th) will be required.

15. The bidder should possess minimum 5 Years' experience in direct supply, installation, testing and commissioning of similar items to the Govt./Public Sector/Reputed Institutions. Proof of direct dealership details i.e. OEM authorization letter/dealership certificate for supply along with 5 Prime Customers contact details and photocopies of Purchase Order and/or installation report, to whom the similar items have been supplied by the Tenderers, is required to be submitted along with the Technical Bid.

16. To assist the examination, evaluation and comparison of bids the University may at its discretion ask the bidder for clarification of its bids at any stage of the Tender. The request for clarification and the response shall be in writing and no change in price or substance of the bid shall be

sought, offered or permitted. (This, however, does not preclude any negotiations with the winning bidder).

17. The successful bidder has to deposit a Performance Guarantee equal to 10% of total cost of the items to be supplied, in the form of FDR/Bank Guarantee/TDR for the warranty period (3years), in the name of Finance Officer MD University Rohtak. When Performance Guarantee/warranty is deposited, EMD will be returned subsequently.

18. Fax /Telex and incomplete offers will be summarily rejected. The University reserves the right to accept or reject any or all bids received at its absolute discretion without assigning any reasons whatsoever. Late bids will not be considered. Any tender received after deadline for submission of Tender prescribed by the MD University Rohtak shall be rejected.

19. The authorized bidder must have a minimum annual turnover of Rs. 5.00 crores failing which the bid will be rejected. Proof of turn over may be appended with the bid.

20. 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.

21. Damage to goods or any other loss due to accident etc. during transit shall be the Responsibility of the supplier.

22. Goods shall be accepted subject to satisfactory installation/assembly report of the Inspection Committee/Committee of Experts.

23. The university reserves the right to split the order in two or more Tenderers at its discretion and no queries in this regards will be entertained.

24. The bidder must file rates for all the items. Partial bids are liable to be rejected.

25. The bids of the bidders who do not fulfill the minimum eligibility criteria will not be considered.

26. The bidders must quote rates and other terms and conditions for all the equipment's/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 favor or against any bidder.

27. The Bidder has to submit following Certificate that "It is here by certified that the firm has not been debarred/blacklisted for any reason/period by any central/state Govt. department/University/PSU etc".

28. The rates of Post warranty AMC should be quoted for next two years, year wise, i.e., 4th and 5th years. The payment for the same shall be made on quarterly basis each year. No advance payment will be made.

29. The offers quoted without AMC for 4th & 5th years may not be considered.

30. All the equipment and components to be installed, may be tested/inspected by MD university Rohtak's authorized representatives at any time before and during fitment.

31. Supplier shall be responsible for making payments towards taxes, duties, and license fees etc., incurred until delivery of the item to University Data Centre MD University Rohtak. No tax or duty will be payable by MD University Rohtak.

32. The warranty period will be reckoned from the date of installation and acceptance of the items by MD University, Rohtak.

33. 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.

34. The Technical bids will be opened on 10-02-2015 at 1530 Hrs. at University Computer Centre, M.D. University Rohtak-124001.

35. Bidder may visit the site before summiting their Bids.

CHECK LIST FOR DOCUMENTS TO BE SUBMITTED ALONGWITH TECHNICAL BID

1. Processing Charge Rs. 4000/- through Demand Draft (Non-Refundable).
2. Bid document signed & stamped on each page.
3. A photocopy of the Authorization Certificate from OEMs.
4. Power of Attorney, as applicable, on company letter head.
5. Details of service support centers located in Delhi/NCR/Haryana.
6. EMD 2% of total Bid Amount.
7. Attested photocopies of Income **Tax and Sales Tax returns** for the last three Financial Years (2011-12, 2012-13, 2013-14).
8. Contact details of 5 customers, along with P.O. photocopy and/or installation report.
9. Financial Bid along with EMD in separate sealed envelope.
10. A duly attested photo copy of the Firm Registration number and PAN Number.
11. Any other information that the bidder may like to submit in support of his capabilities and performance etc.

NOTE

1. In case of any queries on technical specifications, please refer the specifications mentioned in "Annexure A" only.
2. Delivery to be made at **:**

    University Computer Centre Rohtak

    MD University

    Rohtak-124 001

    Haryana, India
3. VAT will be at concessional rates, as applicable to non-profit, own-use institutions.
4. Filled quotations may be personally submitted P&S Branch Rohtak or sent through Registered Post or Courier addressed to:

    P&S Branch, 2nd Floor

    Administrative Block,

    M. D. University

    Rohtak-124 001

    (Haryana)
5. The decision of acceptance of the quotation will lie with the competent authority of University, who does not bind himself to accept the lowest quotation and who reserves the right to himself to reject or accept any or all quotations received, without assigning any reason.
6. The quotations are liable to be rejected if any of the above conditions are not fulfilled or if the bid is not accompanied with EMD and Processing Charge.
7. Number of items may vary, as required.
8. The University reserves the right to split the order among more than one Tenderers.
9. Financial Bid of the Tenderers who qualify in the Technical Bid shall be opened in presence of the authorized designated representatives and Tenderers who wish to be present there. The date of Financial Bid opening will be informed to the shortlisted bidders subsequently.
10. The University will be at liberty to involve any expert or consultant in evaluating the bid for completing the entire bid process.

5. SUBMISSION OF TENDER

5.1 SEALING AND MARKING OF TENDER:

5.1.1   The TENDER for Supply, Installation, Testing and Commissioning of Blade Servers, Storage, Deployment of Virtualization Solution to virtualize the Servers, Migration of existing applications and data into Servers and Storage must be complete in all aspects and should contain requisite certificates, informative literature etc.

5.1.2   Tender Document can be downloaded from MD University Rohtak website (www.mdurohtak.ac.in).

5.1.3   This is a two part bid consisting of Technical Bid and Financial bid. The Technical and Financial bids should be sealed in separate envelopes and then both to be sealed together in one large envelope clearly superscribed on the envelope, "Supply, Installation, Testing and Commissioning of Blade Servers, Storage, Deployment of Virtualization Solution to virtualize the Servers, Migration of existing applications and data into Servers and Storage". The EMD shall be enclosed with the Technical Bid.

The bid shall include:

      a.   Forwarding letter by the Tenderer

      b.   All required documents

      c.   Tender processing charges (non-refundable)

      d.   Interest free EMD (Earnest Money Deposit) in the form of Demand Draft in favour of Finance Officer MD University Rohtak, payable at Rohtak, from a Nationalized Bank to be submitted with Technical Bid.

      e.   Technical Bid

      f.   Financial Bid

5.1.4 TENDER should be addressed to:-

> **P&S Branch, 2nd Floor**
> **Administrative Block,**
> **M. D. University**
> **Rohtak-124 001**
> **(Haryana)**

      a.   The TENDER should be submitted in the office of the P&S Branch 2nd Floor Administrative Block MD University, Rohtak before 2.30 PM on 10-02-2015.

      b.   Tenders may be received through Post/courier/by hand. MDU Rohtak will not be responsible for any delay or misplace in postal receipt.

5.2 EXPENSES OF AGREEMENT:

All the expenses on the execution of the Agreement (if any) including cost of stamp or any other kind of expenditure incurred in the process of TENDER submission till final compliance shall be borne   by the Tenderer.

5.3 DEADLINE FOR SUBMISSION OF BIDS:

TENDER must be received by the MD University Rohtak at the date, time and address specified in the TENDER notice/TENDER documents.

5.4 LATE BIDS:

Any TENDER received after the deadline specified for submission of TENDER may be rejected without any further correspondence to the Tenderer.

6. TENDER OPENING

6.1 **OPENING OF FINANCIAL BID:**

Financial Bid (Tenders) of the Tenderers who qualify in the Technical Bid shall be opened in the presence of designated Authority and Tenderers who wish to be present there. The date of financial bid opening will be informed to the shortlisted bidders subsequently.

6.2 **CLARIFICATION OF TENDER:**

To assist in the examination, evaluation and comparison of Tender, University may at its discretion ask the Tenderers for a clarification on the Tender which is submitted by him. The request for clarification and the response shall be in writing.

6.3 **EVALUATION OF TENDER:**

University will be at liberty to involve any expert or consultant and use appropriate metrics and weightages in evaluating the bid for completing the entire bid process.

7. AWARD OF PURCHASE ORDER

Successful Tenderer shall be awarded the Purchase Order. If after accepting the Purchase Order, the agency fails to supply the items, EMD will be forfeited and the agency will be blacklisted, in addition to recourse to other penal measures. No grievance will be entertained in this regard.

7.1 University reserves the right to negotiate with eligible Tenderer before finalization of the Tender and/or contract.

7.2 University reserves the right at the time of award of Purchase Order to increase or decrease even obsolete the number of items without any change in terms and conditions.

7.3 The bidders must quote rates and other terms and conditions for all the equipment/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 favor or against any bidder.

8. NOTIFICATION OF AWARD

Prior to the expiration of the period of Tender validity, the University will inform the Tenderer appropriately that the Bid has been accepted and the Purchase Order has been awarded.

(Signature of Tenderer)
Official seal

Technical Bid: Annexure 'A'

Tender for Supply, Installation, Testing and Commissioning of Blade Servers, Storage, Deployment of Virtualization Solution to virtualize the Servers, Migration of existing applications and data into Servers and Storage, **University Computer Centre**, M.D. University, Rohtak- 124001**.**

Note: University data Centre is having IBM Flex System enterprise Model No 8721-A1A & Storage as IBM Store wiz V7000 model no 2076-124. The Vendor can use that Chassis and Storage Controller. Further Details can be collected upon visiting University Computer Centre. The Selected vendor will be responsible for end to end integration of the solution including connectivity to the existing system and software installation/fine tuning.

Minor Variation in specification compliance issues would be acceptable but for price comparison it may lead to some loading to be decided by the technical committee of the University.

S.No.	Item	Description with Specification	Qty
Technical Specifications for Data-Centre			
1	**Blade Chassis (If Required) Same OEM as that of Blade Servers**			
	Blade Chassis	Blade chassis shall be 19" Electronic Industries Alliance Standard Width rack mountable and provide appropriate rack mount kit.	1
	Power	The enclosure should be populated fully with power supplies of the highest capacity & energy efficiency of a minimum of 90%.	
		The power subsystem should support N + N power redundancy (where N is at least equal to 2) for a fully populated chassis with all servers configured with the highest CPU configuration, maximum memory and IO configuration possible	
	Cooling	Each blade enclosure should have a cooling subsystem consisting of redundant hot pluggable fans or blowers enabled with technologies for improved power consumption and acoustics	
	Chassis connectivity	The chassis must have redundant modules for connectivity - Ethernet and Fiber Channel OR converged fabric modules in lieu thereof	
	Converged Module	Chassis should have sufficient number of redundant 10gb based converged modules to provide a minimum of 10Gbps per blade server and 5Gbps sustained per blade server (with 1 module failure)for a fully populated chassis for LAN & SAN Traffic.	
	Ethernet Module	Chassis should have sufficient number of redundant 10 Gb based ethernet modules to provide a minimum of 6 Gbps per blade server and 3 Gbps sustained per blade server (with 1 module failure)for a fully populated chassis for LAN Traffic.	
	FC Module	Chassis should have sufficient number of redundant 8 Gbps based ethernet modules to provide a minimum of 4 Gbps per blade server and 2 Gbps sustained per blade server (with 1 module failure) for a fully populated chassis for FC Traffic.	
	Management	Must be able to show the actual power usage and actual thermal measurement data of the servers across chassis	
		Administrators should have the ability to set a cap on the maximum power that the chassis / physical server can draw in order to limit power consumption for non critical applications	
		Redundancy should be built in the management subsystem so that if one management module fails other should be able to take over automatically. Management solution should be provided so that management upto 16 blade blade chassis can be done from single console.	
		Role Based Access Control and remote management capabilities including remote KVM should be included	
		Should support an environment where server identity including - server BIOS version, MAC ID, NIC firmware version, WWPN, FC-HBA firmware version, Management module firmware version, Server Boot Policies, KVM IP etc can be created	
		Movement of server identity from one slot to another in the event of server failure within chassis as well as across chassis.	
	Licensing	Should include all necessary licenses for management for a fully loaded Blades chassis.	

	Access Connectivity	Vendor should quote either LAN and SAN TOR Switch or FCoE TOR switch	
	Network scalability	Vendor should provide standard access/TOR 10g based Layer - 2 switch which can aggregate minimum 2 chassis and more and provide 10g of uplink connectivity per blade chassis.	
	SAN Scalability	Vendor must supply FC TOR / edge switch which can accommodate minimum 2 chassis and more.	
	FCoE Enable Switch	For Vendor supplying FCoE based solution must quote TOR FCoE enabled switch to aggregate minimum 8 chassis and more. FCoE TOR switch must in turn connect to existing LAN core / Aggregation switch using 10 Gig SFP+ connectivity and SAN core switch using line rate 8 Gbps FC ports.	
	Warranty	3 yrs - 24/7 support for all parts on all working days.	
2	**Blade Servers.**	IBM/Lenovo, DELL, CISCO or HP make	
	Processor	Each blade server should be configured with a minimum of two CPU of Intel® Xeon® Processor E5-2670 v3 (30M Cache, 2.30 GHz)/ DDR4 2133MHz or higher available in latest series	5
	Memory	Each blade server should be configured with 128GB (2133MHz) ECC memory (All modules of Equal capacity) upgradable in a total capacity of 128 GB of memory with 50% slots free for future expansion	
		The server should have at least 16 DIMM slots and a maximum scalability of up to 512 GB of DDR4 memory	
	HDD	2 x 300GB 6Gbps 10K SAS Hard Disk Drive with RAID1 & should be able to support hot swap SSD drives	
	Interface ports	The Blade server should support Ethernet and fiber channel connectivity OR Converged Network Adapters in lieu of the same. The Converged Network Adapters should aggregate both the Ethernet and FC connectivity on a single fabric	
	IO bandwidth	The server should provide a minimum of 36Gb aggregate bandwidth per server (2 x 10Gb for Ethernet and 2 x 8 Gb for FC OR 4X10Gb for Converged Network adapter). Server should support the scalability to 80gb of LAN & SAN traffic.	
		The server should be able to offer 32 number of virtual NIC and virtual HBAs	
	Management	It should support remote/virtual KVM capability from an external keyboard, video monitor and mouse to all blades installed in the chassis through the management controllers and should also support virtual media for DVD access.	
	Operating System compatibility	Red hat Linux 5 or above, Win 2012 standard and datacentre, SuSe Enterprise server 10 and above	
	Windows OS	All servers has to be supplied with Windows Server 2012 R2, Datacenter Edition, x64, Including 10 CALs, with Support for High availability clustering	
	Warranty	3 yrs - 24/7 support for all parts on all working days.	
3	**Storage Area Network (Same OEM as that of Blade Servers or EMC)**		1
	Storage Architecture	SAN Storage System with no single point of failure architecture. Storage subsystem should also be able to support Unified (SAN & NAS) as an integrated offering. Management of storage system should be through single management tool. NAS headers (for Future) must be non-windows (Unix/Linux based). The architecture should allow modular upgrades of hardware and software for investment protection.	
	Storage Controller	System to have minimum Two controllers, each controller to have 64 bit Quad -core or higher CPU	
	Storage Cache / System Memory	The system should have a minimum of 32GB of system memory mirrored across dual SAN controllers. Cache should be scalable to a minimum of 128GB with controller upgrade within the same chassis. The SAN storage system must keep write cache persistent during fault conditions. Array should support cache de-stage to disk or battery backed cache in order to avoid any data loss due to abrupt power outage.	
	Front-end Ports	Proposed should have minimum 4 FC Host ports at 8 Gbps per controller and should support additional iSCSI / FCoE ports in each controller. The storage arrays shall minimum support 8Gbps FC, 1Gbps iSCSI, 10Gbps iSCSI & FCOE Protocols. Both FC and iSCSI ports shall have the capability of host connectivity and array based remote	

		replication.	
	Back-end Disk Ports	Storage System should have minimum 8 X 6Gbps SAS backend lanes per controller	
	Storage Capacity & Performance Configured	System should be configured to deliver 23 TB usable capacity on SAS (10K or 15K) & SSD (SLC/eMLC) drives. System should be sized to deliver the performance required for 210000 SAPs (70 : 30 Read Write) on RAID 5. Supplier to include the required number of SSD drives & share the sizing calculation explaining how the designed solution is meeting the required IOPS.	
	Storage Scalability	System should be scalable to minimum 250 Disk Drives by adding disk shelves without the need of controller addition or upgrade. If required proposed system should be upgradable to higher models in the same family with controller based upgrades.	
	Disk Support	System should support 600GB, 900GB & 1.2 TB 10k rpm 6Gbps SAS Disks & 300 / 600GB 15K rpm 6Gbps SAS Disks. System should also support 1TB, 2TB, 3 & 4 TB 7200 rpm SATA II or 7200 rpm NL-SAS (Nearline SAS) Disk Drives. System should also support enterprise level (SLC/eLMC) SSD drives.	
	Protocols Support	System should be configured with 8 x 8 Gbps FC ports. All the licenses should be provided.	
	RAID Support	Should support RAID 0, 1, 10, 5, 6	
	Storage Array Management	Easy to use GUI based and web enabled administration interface for configuration, storage management. Storage Management software must include both GUI and CLI tools. It must be able to centrally manage and monitor multiple arrays of same class from the vendor over the network. It must support event auditing for security. Should be able to support automated email to vendor support centre for proactive maintenance. Should be able to report metrics including Inventory of all components, reports on Capacity (raw, user, compressed, oversubscribed), reports on Performance (throughput, bandwidth, queue length, service time, response time), Health (availability, SLA).	
	Snapshots and Full Copy (Snap Clone)	The Storage array should support controller based functionality for pointer based snap copies as well as full physical copies. The pointer based snap copies should require minimal space for creation of snapshot. The snapshot should use industry standard, copy-on-first-write technique and should support read/write mode. License for snapshot/clone & restore should be included with the BOM.	
	Thin Provisioning, Compression	Offered Storage System to support Compression & Thin Provisioning. License for same should be included in the BOM.	
	On-line Expansion / RAID Group creation / Pool Expansion	System support online expansion of RAID Group or addition of new RAID Group. Must be able to add additional disks on the fly to expand the RAID group capacity or create new RAID Group.	
	Subsystem based striping	Most applications benefit from striping across multiple spindles. The array must support subsystem based striping across for enhanced performance. This should be inbuilt into the storage and should not require any host based volume manager.	
	Autotiering	Proposed system should support Automated Tiering. Tiering should happen at the block level, providing more granular movement of data within the LUN by automatically moving data. Tiering should happen between all 3 tiers i.e. Flash, SAS and NL-SAS drives. Tiering policy should be managed by the same storage management interface. License for same should be included in the BOM.	
	Disaster Recovery / Replication Support	Storage array should be capable of replicating SAN Data to DR Location Synchronously or Asynchronously. Storage array should support storage based long distance data replication, if required through optional software license.	
	Virtualization integration	Storage system must be able to discover and monitor virtual machines so that entire environment can be mapped from virtual machines to physical disk from a single management GUI. Storage must have virtualization API integration Storage based replication must support integration with SRM in order to automate Disaster Recovery failover and failback. If required necessary licenses to be quoted.	

	Global Hot Sparing	System should have the capability to designate global hot spares that can automatically be used to replace a failed drive anywhere in the system.	
	QoS	It should be possible to fine tune the storage performance on different parameters. License for same or equivalent should be included in the BOM.	
	Warranty and Support	3 Years 24 x 7 x 365 premium support for hardware and software.	
4	**Rack Infrastructure (Same OEM as that of Blade Servers)**		1
		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 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 or 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 (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	
5	**Vertical Power Distribution Unit for Rack (Same OEM as that of Blade Servers or APC)**		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)	
		Should support both C13 & C19	
		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	

		Sufficient no of C13 & C19 Power cables with n+n Redundancy must be also provided	
6	**Rack Mountable Folding LCD Monitor with In-built Keyboard & Mouse (Same OEM as that of Blade Servers)**		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 USB based inputs	
7	**SSD Drive**	300 GB Enterprise class SSDs compatible with the servers	4
8	**RAM**	16 GB (2133MHz) ECC memory Modules compatible with servers	8
		16 GB (1600MHz) DDR3 ECC memory Modules compatible with servers	8
9	**SOFTWARE (Licenses subject to the latest edition as available before the date of delivery)**		
a	Windows Server Datacentre (Academic) Latest Edition for quoted servers		5
b.	**V-sphere with Operations management or Microsoft System center 2012 R2 with Hyper V** Qty.(11 Servers, 22 Processor (8 Cores Each))		
		Virtualization software shall provide a Virtualization layer that sits directly on the bare metal server hardware with no dependence on a general purpose OS for greater reliability and security.	11 Servers, 22 Processor (8 Cores Each)
		Virtualization software should be able to boot from iSCSI, FCoE, and Fibre Channel SAN	
		Virtualization software shall have the capability to create Virtual servers with upto 8 processors in virtual machines for all the guest operating system supported by the hypervisor.	
		Virtualization software shall integrate with NAS, FC, FCoE, and iSCSI SAN and infrastructure from leading vendors Leverage high performance shared storage to centralize virtual machine file storage for greater manageability, flexibility and availability.	
		Virtualization software shall allow heterogeneous support for guest Operating systems like Windows client, Windows Server, Linux (at least Red Hat, SUSE, Ubuntu and CentOS), Solaris x86 and Novell Netware.	
		Virtualization software shall have the capability for creating virtual machine templates to provision new servers	
		Virtualization software shall allow taking snapshots of the virtual machines to be able to revert back to an older state if required.	
		Virtualization software should have the ability to thin provisions disks to avoid allocating all storage space upfront. Full monitoring capabilities and alerts to prevent from accidentally running out of physical storage space.	
		Virtualization software should support connecting smart card readers to multiple virtual machines, which can then be used for smart card authentication to virtual machines.	
		Virtualization software should Support live Virtual Machine migration with enhanced CPU compatibility	
		Virtualization software should have the ability to live migrate VM files from one storage array to another without no VM downtime. Support this migration from one storage protocol to another (ex. FC, iSCSI, NFS, DAS)	
		Virtualization software shall be able to dynamically allocate and balance computing capacity across collections of hardware resources aggregated into one unified resource pool with optional control over movement of virtual machines like restricting VMs to run on selected physical hosts.	
		Virtualization software should provide dynamic power management such that incase during off peak hours not all servers are required to be powered on due to less load it should place few servers in G2/S5 (Soft Off) power state as per the Industry Standard Advanced Configuration and Power Interface (ACPI) specifications to save power in an automated or manual or scheduled manner.	
		Virtualization software shall have High Availability capabilities for the virtual machines	

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		in the sense if in case one server fails all the Virtual machines running on that server shall be able to migrate to another physical server running same virtualization software. The feature should be independent of Operating System Clustering and should work with FC/ iSCSI SAN and NAS shared storage.	
		Virtualization software should have the provision to provide zero downtime, zero data loss and continuous availability for the applications running in virtual machines in the event of physical host failure, without the cost and complexity of traditional hardware or software clustering solutions.	
		Virtualization software should provide an integrated network firewall solution for virtual network with centralized management, suitable for all virtualized applications which should provide below features:-	
		1) It should be hypervisor-based application-aware firewall solution for virtual datacenters.	
		2) It should have the ability to control Inbound/outbound connection by enforcing at the virtual NIC level through hypervisor inspection, supporting multihomed virtual machines.	
		3) It should provide IP-based stateful firewall and application layer gateway for a broad range of protocols including Oracle, Sun Remote Procedure Call (RPC), Microsoft RPC, LDAP and SMTP.	
		4) It should provide policy enforcement based on 5 tuple (source IP, destination IP, source port, destination port, protocol).	
		5) It should have the ability of Inbound and outbound connection control with rules based on IP address (source/destination IP address), Ports (source/destination port), Protocol type (TCP or UDP).	
		6) It should provide masquerading of virtual datacenter IP addresses to untrusted locations.	
		7) It should be based on industry-standard syslog format.	
		· Virtualization software must support built-in storage multi-pathing	
		· Virtualization software should provide abilities to offload specific storage operations to compliant storage hardware thereby performing these operations faster and consuming less CPU, memory, and storage fabric bandwidth	
		Virtualization software should provide enhanced visibility into storage throughput and latency of hosts and virtual machines that can help in troubleshooting storage performance issues.	
		Virtualization software should allow configuring each virtual machine with one or more virtual NICs. Each of those network interfaces can have its own IP address and even its own MAC address	
		Virtualization software must support NIC teaming for load sharing and redundancy.	
		Virtualization software shall allow creating virtual switches that connect virtual machines	
		Virtualization software shall support configurations of 802.1q VLANs which are compatible with standard VLAN implementations from other vendors	
		Virtualization software should allow dynamic adjustment of the teaming algorithm so that the load is always balanced across a team of physical network adapters	
		Virtualization software shall continuously monitor utilization across virtual machines and should intelligently allocate available resources among virtual machines	
		Virtualization software should allow redirection of virtual machine serial ports over a standard network link thereby enabling solutions such as third-party virtual serial port concentrators for virtual machine serial console management or monitoring	
		Virtualization software shall allow RAM over-commitment that allows to configure virtual machine memory in such a way that safely exceeds the physical server memory.	
		Virtualization software shall allow usage of Remote devices which allow Installation of software in a virtual machine running on a server from the CD-ROM of a desktop	
		Virtualization software should provide support for Microsoft Cluster Services between virtual machines	
		Virtualization software should provides an integrated back-up solution in addition to support for a centralized backup proxy to offload backup from virtualization host.	

Virtual Machines Management Software Suite			
		Virtualization management software console shall provide a single view of all virtual machines, allow Monitoring of system availability and performance and automated notifications with email alerts.	
		Virtualization management software should have integrated Physical Host and Virtual Machine performance monitoring including CPU, Memory, Disk, Network, Power, Storage Adapter, Storage Path, Cluster services, Virtual machine datastores.	
		Virtualization management software console shall provide reports for performance and utilization of Virtual Machines. It shall co-exist and integrate with leading systems management vendors	
		Virtualization management software console shall provide capability to monitor and analyze virtual machines, and server utilization and availability with detailed performance graphs.	
		Virtualization management software console shall allow to Move a powered off virtual machine from one physical server to another by dragging and dropping the virtual machine icon.	
		Virtualization management software console should allow cloning of both powered on and powered off virtual machines.	
		Virtualization management software console shall provide Interactive topology maps to visualize the relationships between physical servers, virtual machines, networks and storage.	
		Virtualization management software console shall maintain a record of significant configuration changes and the administrator who initiated them.	
		Virtualization management software console shall provide the Manageability of the complete inventory of virtual machines, and physical servers with greater visibility into object relationships.	
		Virtualization management software should provide a global search function to access the entire inventory of multiple instances of virtualization management server, including virtual machines, hosts, datastores and networks, anywhere from within Virtualization management server.	
		Virtualization management software should support user role and permission assignment (RBAC)	
		Virtualization management software should allow you to deploy and export virtual machines, virtual appliances in Open Virtual Machine Format (OVF).	
		Virtualization management software should allow reliable and non-disruptive migrations for Physical/ Virtual machines running Windows and Linux operating systems to virtual environment.	
		Virtualization management software should include provision for automated host patch mgmt with no VM downtime	
		Virtualization management software should generate automated notifications and alerts, and can trigger automated workflows to remedy and pre-empt problems.	
		Virtualization management software should be able to integrate into existing standard EMS systems.	
		Support	
		OEM to be able to provide direct support (For installation and Maintenance).	
10	Training (Server, Storage management , Server Virtualization and OS Fine Tuning & Management)		4 Persons

Signature   :

Place: Vendor Name   :

Date: Office Address with seal

Annexure 'B'

Financial Bid:

For Supply, Installation, Testing and Commissioning of Qty.04 Nos. Blade Servers, Deployment of Server Virtualization Solution to virtualize the Servers at MDU Rohtak, M.D. University Campus, Rohtak-124001**.**

S No.	Item Descriptions		Unit Price Inclusive of all Taxes	
			Figures	**Words**
	Supply, Installation, Testing and Commissioning of Blade Server		**Rs.**	
1.	**Blades** Make: Model:		**Rs.**	
2.	**Storage** Make: Model:		**Rs.**	
3.	**Virtualization** Make: Model:		**Rs.**	
4.	**42 U Rack (From same OEM Either of Blades or Storage)** Make: Model:		**Rs.**	
5.	**Vertical Inteligent PDU** Make: Model:		**Rs.**	
6.	**Rack Mountable Folding LCD Monitor with In-built Keyboard & Mouse** Make: Model:		**Rs.**	
7.	**SSD Drive** Make: Model:		**Rs.**	
8.	**RAM (ECC)** Make: Model:		**Rs.**	
8.	Windows Server Datacentre (Academic) Latest Edition Make: Model:		**Rs.**	
9.	Installation cost	Free of cost	**Yes**	
		If **NO** then	**Rs.**	

10.	AMC from OEM for 4th & 5th year to be provided on Blade Servers, Storage, Server Virtualization Solution used virtualize the Servers. Payment of AMC will be yearwise on Quarterly basis	For 4th year	For Blade Server (Details as mentioned in Annexure 'A'	Rs.	
			For Server virtualization Solution (Details as mentioned in Annexure 'A')	Rs.	
		For 5th year	For Blade Server (Details as mentioned in Annexure 'A')	Rs.	
			For Server virtualization Solution (Details as mentioned in Annexure 'A')	Rs.	
	Training (Server Storage management Server Virtualization OS Fine Tuning & Management			Rs.	
			If **NO** then		

Note:

1. No freight charges will be paid extra.
2. Items will be delivered & installed at Data Centre, University Computer Centre Rohtak, M.D.U, Rohtak 124001 (Haryana).
3. Rates quoted are inclusive of VAT/CST and other Taxes.

Signature   :

Place: Vendor Name   :

Date: Office Address with seal